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A GOOD TIME TO BEGIN FOREIGN TRADE.

IT should be of interest to members of the rubber trade who are in a position to devote attention to the export branch to consider how greatly conditions have changed of late with regard to means of transportation and communication in some hitherto inaccessible parts of the world. A manufacturer has been heard to say recently that if he were beginning now, instead of conducting an established business, he would try particularly to secure foreign trade, but he felt that at his time of life it was too late to enter a new field in which development seemed bound to be slow. There may be many other reasons why an old house—or a new one—should confine its energies at home, but development in many lines of business will be found to be as rapid nowadays in some other parts of the world as in the United States. South Africa is nearer to New York to-day than California was when many members of the rubber trade now living first entered the business, and the African consumption of rubber goods is greater than that of the Pacific coast states when selling agencies for such goods were first opened in San Francisco. A manufacturer who made a start in the far western trade in the earlier days, and waited for his business there to "grow up with the country," might not have to wait so long for the same rate of growth in many foreign markets which are just now being opened.

It has not been so many years since Henry M. Stanley ventured for the first time into the heart of Africa and laid the foundation for his fame by his bravery in locating the lost explorer Dr. Livingstone. To-day the same spot is the center of a prosperous British colony, reached regularly by river steamboats and on the line of the projected "Cape to Cairo" railway. One of THE INDIA RUBBER WORLD's exchanges is printed there, with native labor, and they have a telegraph service, also operated by black men. Already the colony has a foreign trade of importance, which seems likely to become larger rather than less in the near future.

On returning from a later tour of "the dark continent" Stanley sent word ahead of his sailing for home—and THE INDIA RUBBER WORLD was held on the presses in order to print it—that the Congo basin would yet become the rubber reservoir of the universe. There was no Congo rubber trade then, and European goods, passing from one native to another, sometimes required five years to reach the upper valley. Now there is a Congo railway, operated at a profit; the rate of production of rubber in the Congo basin has become second only to that of Brazil; and goods may be shipped from the principal ports of Europe to the head of the Congo river in two or three weeks.

This paper could be filled with examples of the rapid development of portions of Africa alone, to say nothing of other parts of the world the opening of which to outside trade has been comparatively recent and which must long depend upon the United States and Europe for manufactured goods. The exports from Cape Colony alone last year, exclusive of gold, amounted to \$42,000,000; gold mining dividends were disbursed by the Transvaal compa-

nies to the extent of \$24,000,000; nearly 10,000 miles of railways are in operation in Africa; the imports of merchandise into British Africa alone reach \$131,000,000 in value—and so figures might be quoted indefinitely.

All of this development has been recent, much of it very recent, and the rate of progress is all the while quickening. The promise of trade in these hitherto undeveloped countries has been great enough to induce nearly every European country to get into position either to seek in them new outlets for their manufactures, or else to handle the native products at a profit. A question for American manufacturers and merchants to ask themselves is whether they are less qualified than those of other nationalities to profit by the trade of the new fields.

We believe this to be a good time to begin more systematic efforts in foreign markets, and there could not be a better means for such a beginning than is likely to be afforded by the Paris Exposition of 1900.

A COMING NEW DEMAND FOR RUBBER.

THE probability that the near future is to witness a great increase in the use of India-rubber for electrical insulation should prove of interest to the rubber trade in every branch, for the reason that each addition to the demand for crude rubber affects the cost of the material to all classes of consumers. Not only are the various uses for rubber insulated wires and cables with which the world is already familiar certain to be extended greatly, with the commercial development of cities and countries hitherto considered as not being in touch with modern progress, but it appears that rubber is becoming an important item in submarine cable work. This means that rubber will not become cheaper for boots and shoes, mechanical goods, and sundries, unless unexpected additions should be made to the world's production of the raw material; instead, prices may go higher.

Most people are accustomed to think of submarine cables only in connection with communication across oceans. When the proposed Pacific cable is discussed the remark is apt to be made that, after this has been constructed, there will not be much work for the cable companies for a good while to come. But the fact is that the cables which cross oceans to-day form far less than half of the deep sea lines in operation. There are now working, according to the latest detailed statistics, submarine cables of a length of 167,077 nautical miles, of which 103,628 miles, or 62 per cent. of the whole, consist of lines of less than 1000 miles each. The total number of cables is stated at 1571, which would give an average length of 106 1-3 miles per cable. These short lines connect British ports with each other and with France, Germany, Holland, and Belgium; they connect ports of Russia, Norway and Sweden, and Denmark; they are strung along the coasts of Africa, of South America, and India; they stretch from point to point around or under the Mediterranean; and, lately, they have been laid to connect several of the Philippine Islands. It is the building of these shorter cables that has kept the great cable companies employed in the

intervals between building the transatlantic cables, and it is in the shape of such lines that the chief development of the cable industry will continue to be seen.

It is in the shorter lines that the experiments in India-rubber insulation for submarine work have been made which have demonstrated its suitability for the purpose, and even if India-rubber should not be used for the first Pacific cable to be built, there are likely to be enough other demands for it in coastwise lines to cut an important figure in rubber prices in the near future.

RUBBER AT THE PARIS EXPOSITION.

THE *Gummi-Zeitung* (Dresden) quotes in full from THE INDIA RUBBER WORLD, a recent editorial concluding with this paragraph:

The real competition for supplying the markets of the world with rubber goods is likely to fall, before a great while, between the United States and Germany, and whether this country or that makes the better impression at Paris may decide which of the two will take the lead in the rubber trade so far as exports are concerned.

Our contemporary comments as follows: "We consider especially the last proposition of this opinion as noteworthy, as it doubtless contains an important truth. We trust it may be understood by our manufacturers in its fullest meaning and be met with a determined response. It will certainly be a disadvantage if the German rubber industry does not maintain its leading position at the Paris exposition."

It may be mentioned that THE INDIA RUBBER WORLD'S Berlin correspondent wrote recently: "The Association of German Celluloid Manufacturers, at a session held September 11, resolved to refrain from visiting the Paris Exposition next year, owing to the sad impression caused by the Dreyfus affair." This subject is introduced here for the reason that there has been some newspaper talk over the probability of much harm to the Exposition resulting from the result of the Dreyfus court martial. There are strong reasons, however, for believing that such will not be the case, and least of all as regards the more important industries of Germany. That country did hold aloof from participating in the Paris exposition of 1889, and it has been a source of regret to German manufacturers ever since. For this reason Germany took special pains to be well represented at the Chicago world's fair of 1893, in consequence of which the German exhibits in many lines excelled those of all competitors. Kaiser Wilhelm is understood to be deeply interested in the impression which the exhibits from his country may make at Paris next year, and a government commission has been appointed to see to it that nothing is permitted to appear in the German section which is not truly representative of the best that can be offered in the particular line to which it belongs. This is another reason why the rubber industry of the United States should not be placed at a disadvantage at Paris by a failure to make a suitable exhibit.

AN INTERESTING SIDELIGHT is thrown on the motives which influence the consolidation of industrial corporations by some figures contained in the prospectus issued by the new American

Bicycle Co. to induce the public to subscribe for their bonds. The net profits of the forty-four companies now consolidated are reported to have been—

In 1896.....	\$7,763,460.39
In 1898.....	3,983,634.32

Doesn't this showing serve as a sufficient explanation why no suggestion was heard looking to consolidation in 1896, whereas by 1899 the manufacturers had become so eager to consolidate that they were willing to pay a big bonus to a syndicate of bankers to help them get together? It is still a pretty safe assumption that, where a manufacturing concern is anxious to combine with a lot of other concerns, the showing of profits is not wholly satisfactory to the stockholders. Otherwise, these stockholders would be anxious to keep the business in their own hands.

THE MAN WITH A NEW IDEA, no matter how good, usually has to work hard to get it widely adopted, even in America, where the people consider themselves particularly progressive. The pioneers in the rubber carriage tire line worked here for years before meeting any substantial encouragement, but now all the manufacturers of such goods are crowded with orders. This suggests that the delays which are met wherever a new line of exports is attempted are often precisely of the same class. They are due to the fact that the thing offered is new, rather than that it is produced in any given country, or as offered by any particular firm. In some cases goods of the class offered abroad might not find a readier sale, at the beginning, if offered by people in the country in which purchases are sought. What needs to be kept in mind is that the same sort of perseverance is needed to build up a trade in a new line in any part of the world, and the American in search of a foreign market must not expect to secure it with the first effort any more than he would expect such a thing in New England or New York or the Mississippi valley.

THE WORLD IS THE FIELD of the progressive manufacturer to-day. The most important illustration of the fact is to be seen in the iron and steel trades, because of the enormous extent of that industry and the widespread nature of the demand for its products. Whoever wants to buy iron or steel in large quantities nowadays, whether in Africa or Asia or Australia, the United States or Europe, immediately inquires where the material needed can be had most promptly or at the lowest price; it doesn't matter where the material may be produced. We are certain soon to see the same conditions prevailing in the smaller industry which is based upon India-rubber as its chief raw material. It is apparent to all who keep their eyes open that the demand for rubber goods is increasing, not only in the countries where such goods are made, but in countries where no rubber factories exist and where none ever are likely to exist. The problem for wideawake manufacturers in this line is to determine what country is to hold first place in supplying the world's market for rubber goods. The market of any one country is relatively unimportant. The situation seems to be appreciated in Germany to an extent which the rubber men of America and Great Britain would do well not to lose sight of. We have a letter from Berlin which says: "There are innumerable small rubber factories springing up just now here in this vicinity. The manufacture of automobile tires is going to be the biggest thing yet." And all the information that reaches us from Germany is of the same tenor.

THE CHANCES FOR A FORTUNE in rubber for the future are likely to exceed anything experienced in the past.

THE BICYCLE TRUST MAKES A START.

BOOKS were opened in New York on October 5 for subscriptions for \$6,300,000 of the 5 per cent. gold \$1000 bonds of the American Bicycle Co., the remainder of the \$10,000,000 issue having been taken already by members of the new corporation. It is understood that not more than \$1,000,000 were subscribed for within the time specified. In regard to these bonds President Spalding is reported as saying that they were offered at the wrong time, the conditions of the money market being such that Government bonds were hardly salable, but that as the bonds were all underwritten, they were practically all subscribed for.

A prospectus issued by Baring, Magoun & Co. (New York), the company's bankers, states that the bicycle concerns involved marketed—

During the year 1897.....	562,100 bicycles
During the year 1898.....	661,232 bicycles
During the year 1899 (partially estimated).....	841,642 bicycles

—the fiscal year of most of the companies ending between July 1 and August 1. These companies claim to be manufacturers of about 60 per cent. of the bicycle output for the United States and Canada, which would point to a total production of 1,100,000 wheels in 1898.

The prospectus further shows the following net earnings of these factories—after deducting all charges for interest on capital and depreciation on machinery and plant:

In 1895.....	\$5,118,957.68	In 1897.....	\$3,708,867.28
In 1896.....	7,763,460.39	In 1898.....	3,328,884.77
In 1899 (partially estimated).....	3,983,634.32		

In a letter to the bankers President A. G. Spalding states that the expenses of marketing the product of the various factories in 1898 was in the neighborhood of \$3,500,000, and estimates that a saving of \$1,400,000 per year can be made in this respect.

The list of directors published last month has been extended by the addition of William Barbour, the thread manufacturer, and George W. Young, Gardiner M. Lane, and George F. Crane, representing the financial institutions interested in forming the company. The prospectus shows the combination to include the Toronto plant of E. C. Stearns & Co. and the Walkerville (Canada) and Paris (France) plants of H. A. Christy & Co. The general offices of the American Bicycle Co. have been established in the Park Row building, New York. This will be the headquarters of Secretary C. W. Dickerson and the meeting place of the directors.

About the middle of October several meetings of the directors were held, presumably with a view to deciding upon the policy of the company. In this connection the New York *Sun* said: "One of the serious questions under consideration by the directors was that relative to tires. It is said to be the desire of the Flint Rubber Trust to absorb the tire plants of the bicycle trust, and that, failing in this, the Rubber Trust may assume an attitude of antagonism toward the cycle combine."

The New York *Times* of October 19 reported: "The stocks of the American Bicycle Co. were traded in yesterday on the curb for the first time. No large amount of stock changed hands, and there was not much fluctuation in the price of stocks. The opening sales were made at 16 for the common and 60 for the preferred. Later the common stock sold at 15½. The bonds were the subject of considerable comment, for the reason that they were offered down to 91½. As far as reported, no better bid than 90 was made. It was rather curious that these bonds that were recently offered to the public at par and interest, should be thus offered down."

THE LITERATURE OF INDIA-RUBBER.

DER KAUTSCHUK UND SEINE QUELLEN. [CAOUTCHOUC AND ITS Sources.] Von Dr. Robert Henriques. Dresden-Blasewitz: Steinkopff & Springer, 1899. [Paper. 8vo. 32 pages+9 tables and maps. Price 1.25 marks.]

THE text of this brochure, read originally before the German Chemical Society, in May, 1897, has been expanded somewhat since, making it a very complete monograph on the rubber producing species and their habitat; the various grades known commercially, and their properties; and the relative production from the various trees and plants. The work as originally printed was noticed in THE INDIA RUBBER WORLD of May 1, 1898. Besides the additions to the text, the present edition is enriched with a series of tables in which are catalogued separately for America, Africa, and Asia the localities from which rubber is obtained, the trade names of the product, the botanical designation of the trees, a description of the rubber as offered to the trade, the percentage of shrinkage, range of prices, etc. These tables are followed by a number of maps, locating every country, port, and river mentioned in the book in connection with the production of rubber. These tables, as was the case with the first section of the work, have all appeared serially in the *Gummi Zeitung* (Dresden).

CIRCULAR. ROYAL BOTANIC GARDENS, CEYLON. SERIES I. NOS. 12, 13, 14—June, 1899. Caoutchouc or India-rubber: Its Origin, Collection and Preparation for the Market, &c. [Peradeniya.] [8vo. pp. 105-168+plate.]

THE principal feature of this publication is a report by Mr. J. Parkin, M. A., of Trinity College, Cambridge, England, who for more than a year was engaged in the Ceylon gardens in scientific experiments upon the several species of rubber under cultivation there. His studies embraced the origin of the latex in these trees, its flow in different species, composition, methods of coagulation, etc. The complete results of Mr. Parkin's work will be published in a different form, but enough appears in the present pamphlet to indicate that Mr. Parkin has made some very important original contributions to our knowledge of the nature of the occurrence of the latex in rubber yielding species, and the conditions to be considered in its extraction and preparation for market. Of particular interest is his comparison of the points of difference between the different species. This is the third "Circular" devoted to India-rubber by Mr. John C. Willis since assuming the directorship of the botanic gardens at Peradeniya, and still another is promised. The result of all this work cannot fail to be a distinct gain in the advance of intelligent supervision of rubber collection.

A SERIES of articles on the cultivation of various species of rubber trees in the Dutch East Indies, contributed during 1898 to *Teysmania*, a monthly journal published at Batavia, Java, in the Dutch language, by Dr. P. van Romburgh, one of the editors, has been reprinted in pamphlet form.

IN CURRENT PERIODICALS.

EXPLOSIONS in India-rubber Works. [Editorial suggesting that no reason appears why sulphide of carbon should not be superseded in factories of this class.] *Engineering*, London. LXVIII-1757 (September 1, 1899.) p. 272.

The Centrifugal Machine and the Future of the Cultivation of Caoutchouc Trees. [Extract from Circular Nos. 12-14, Ceylon Botanic Gardens.] *Revue des Cultures Coloniales*, Paris. V-37 (September 20, 1899.) pp. 185-187.

The Outlook for the Cultivation of Gutta-percha, Caoutchouc, and Pineapple Fiber. [Report of a conference of coffee planters at Malang, Java, to discuss new objects of cultivation, in view of the ravages of the coffee disease. Recommendations by M. Wigman, of the botanic garden at Buitenzorg.] *Revue des Cultures Coloniales*, Paris. V-36 (September 5, 1899.) pp. 146-151.

The *Landolphia Peieri*. [Figure to accompany description previously printed.] *Revue des Cultures Coloniales*, Paris. V-36 (September 5, 1899.) p. 154.

Against the *Urostigma (Ficus) Vogelii*. By P. van Romburgh. *Teysmania*, Batavia. X-1 (January, 1899) pp. 28-32.

Tabernaemontana Angolensis as a Rubber Tree. By Ad. F. Moller. [Found in San Thome, West Africa.] *Der Tropenpflanzer*, Berlin. III-9 (September, 1899.) pp. 452-453.

Cultivation and Extraction of *Manihot Glaziovii* on the Congo. By R. Visser. *Teysmania*, Batavia. X-3, 4 (March, April, 1899) pp. 156-159.

The Caucho of Peru. [Based on Fred. J. Hessel's article in THE INDIA RUBBER WORLD, May 1, 1899.] *La Gazette Coloniale*, Brussels. I-12 (September 10, 1899.) pp. 2-3.

Official Report on Surinam; Especially in Relation to Balata and Cacao. [By Dr. Paul Preuss, director of the botanical gardens in Victoria, Cameroons, sent by the colonial industrial committee in charge of an expedition to Central America and South America; 2½ pages relate to Balata.] *Der Tropenpflanzer*, Berlin. III-9 (September, 1899.) pp. 405-418.

The Production of Rubber in the Amazons. [Condensation of report by United States Consul Kenneday, at Pará.] *Journal of the Society of Arts*, London. XLVII (September 22, 1899.) pp. 824-825.

Rubber in Mexico: *Castilleja elastica*. [Note by a practical planter.] *The Tropical Agriculturist*, Colombo. XIX-3 (September, 1899.) p. 168.

NOTICES OF THE NEW RUBBER BOOK.

IN noticing M. Pearson's "Crude Rubber and Compounding Ingredients" the *Scientific American* (New York) says: "We have on many occasions received inquiries relative to a good book on rubber manufacture and we were always obliged to say that the literature on the subject was limited to stray articles and pamphlets. Now, however, we have a thoroughly practical book on the subject, and we have no hesitation in saying it is the most important contribution ever made to the literature of the manufacture of rubber, and the information is given in succinct form. The author is the editor of THE INDIA RUBBER WORLD, and coming in contact with rubber manufacturers has been able to get an invaluable collection of data. Every step in the manufacture of rubber from the time it leaves the tree is given in detail. All the by products of rubber manufacture, compounds, etc., are given. It is a thoroughly satisfactory contribution to the technical literature of a much neglected subject."

FROM the *India-Rubber and Gutta-Percha Trades Journal* (London): "The most valuable book that has yet been published on India-rubber manufacture is that which has just been issued by the India Rubber Publishing Co., of New York, and, coming as it does from the pen of Mr. Henry C. Pearson, the editor of our American contemporary, it has all the advantages of his experience during the ten years he has so ably conducted that journal in the interests of American rubber manufacturers. The book, which consists of 260 pages, is divided into fourteen chapters, and gives the details of all the different grades of the crude rubber and gutta, and substances akin, together with the various substitutes and chemicals at present in use. . . . As the book will be a necessity in every factory, we do not intend to give any extracts from it, but merely content ourselves by giving an outline of the various sections, which, starting with the grades of crude rubber, the sources of supply and physical characteristics, describes all the known varieties, together with lesser known rubber, and bastard or pseudo gums. . . . We counsel all interested in the rubber trade to obtain a copy as soon as possible."

THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

Special Correspondence of The India Rubber World.

ALTHOUGH it is said that the negotiations in connection with the proposed great combine of British rubber manufacturers are going on satisfactorily, and that the concern will be duly put before the public before the end of the year, there really is but little confirmatory evidence that this correctly represents the state of affairs. I shrewdly suspect that the claims made by some of the smaller concerns which may be excused for harboring exaggerated ideas of their own importance do not meet with the approval of the engineer of the scheme. Further, the improvement in the trade of the last eight months seems to have caused some of the larger concerns to think that the business after all is worth keeping in private hands, and is too good to offer to the public. As regards the actual condition of the negotiations, outsiders are not alone in the difficulty of obtaining accurate information, as many firms in the trade have complained that they have not been taken sufficiently into the confidence of the prime movers. The calico printing combine, which was mooted at the same time as the rubber combine, has so far come to nothing, and with regard to the combine of comb manufacturers in Aberdeen, the rise of prices has had the inevitable consequence of inviting outside competition, the prospectus of a new comb factory in Scotland having just been issued. There can be little doubt that a similar result would follow in the rubber trade if the proposed combine should ever come to be an accomplished fact.

To the waterproof garment manufacturer, at any rate, the change in the weather in September was a source of satisfaction after the hot dry weather of the preceding months. Long periods of drought prove a trying ordeal to such firms as are almost entirely connected with the waterproof business, though there is no reason to suppose that any firms will find themselves in difficulties, as the trade is very brisk at the present time and accumulated stocks have been cleared off well. The difficulty just at present is to get sufficient hands, and some firms are finding themselves considerably handicapped by reason of this. It takes some little time for a novice to become proficient and it is a general complaint, although the cause is not an entirely unnatural one, that just as a girl becomes of value she goes off to enter the bonds of matrimony.

THERE is nothing new in the announcement that a perfect rubber substitute has been made, and will shortly be put upon the market, but an intimation to this effect which has recently appeared in the form of a letter in the columns of the London *Spectator* seems worthy of more than passing notice. The letter is from Duke Gandolfi, who states that Alfred Noble, of dynamite fame, who has recently died, showed him a short time before his death several articles made of a substance having all the properties of India-rubber or Gutta-percha. The duke does not appear to recognize that the two substances are not identical; but to let that pass, he goes on to say that Noble informed him that he intended to put up works in Italy next year and to employ 1500 workmen to make this new compound, which was to be called "Noble's Gutta-percha," and which was to entirely supplant India-rubber. It is suggested in the letter that Noble's secret died with him, as he was known to be of an uncommunicative nature. It will be interesting to see whether

this is really the case, or whether his relatives have the secret in their possession.

IN spite of the fact that lawn tennis as played on private lawns has largely died out, there is no perceptible diminution in the volume of business done by the tennis ball manufacturers. This is due to the fact that, though there has been a great defection of weaker players in favor of golf or croquet, the general standard of play and the number of tournaments has increased, and, as tournament managers know well, the crack player requires a much larger supply of new balls than does the weak player of the private lawn. What with the German competition the business in England is very much cut and can hardly be called a profitable one.

THERE have been two explosions in rubber works recently, due to bisulphide of carbon—one at the Ancoats Vale Works (Manchester) and the other at the Messrs. Birnbaum (London). In the latter case a workman was killed, and at the inquest some light was thrown upon the working of the present Factory Act regulations referring to carbon bisulphide in rubber works. It was alleged by Mr. Birnbaum that the boxing up of the bisulphide vapors in order to protect the workmen from their injurious effects was a source of danger, as when the fan was stopped by any mishap the mixture of vapor and air fired and exploded. It is of course easy to understand that this gaseous mixture is a great source of danger, as it can be ignited by a spark and does not need a flame. Such sparks are in dry weather not infrequently given off from the machine on which waterproof cloth is being cured, though in the old days when the inflammable vapor was allowed to dissipate at will into the air of the room only fires and not explosions used to occur. Some firms, however, have for many years adopted the precaution of boxing in their cold cure machines and have never had any of these explosions, so it seems pretty clear that there must have been something faulty about the arrangements in those cases where explosions occurred, and no doubt improvements can be made which will obviate such disasters in the future. The inquest formed a peg for a London radical paper to hang up some caustic observations about the iniquities of the rubber trade, but although there has no doubt in the past been much injury done to operatives by the careless use of carbon bisulphide, there is plenty of evidence that at the present time, under the strict surveillance of the factory inspectors, little or no inconvenience is caused to those whose lot it is to come in contact with this very disagreeable liquor. It is not so much in the curing of waterproof textures that injury has been done to health in the past; it is more in the case of the women and girls who were employed in the "dipping" of goods made from fine sheet rubber, such as toy balloons, though the actual bulk of liquor used for this purpose was far less than that used in the cure of the waterproofs.

THE mechanical rubber trade at the present time is very brisk and overtime is being generally worked, and there can be no doubt that the mobilization of forces in connection with the Transvaal crisis will result in increased orders from the war department for ground sheets and other military requirements. It is beginning to be recognized by manufacturers that certain branches of the trade give so much trouble in order to comply

with the rather exaggerated demands of the purchasers that they are best left alone. Take for instance India-rubber foot ball bladders, which are made and sold on a large scale in England. Customers make very stringent demands for a bladder which when inflated shall be as nearly as possible a perfect sphere—that is, for the association game. Now this exactness does not really matter, and it is not a particularly easy thing to be attained, and the difficulty of complying exactly with the ideas on this point has caused one prominent firm at least to give up the manufacture of these articles altogether. We would rather make articles where such niceties of form are not a bone of contention, was their remark when spoken to on the subject. The same sort of thing prevails to some extent in the case of the tennis balls, to which reference has been made above. All the tennis balls which are manufactured are not sold for lawn tennis purposes; indeed quite a large number serve no other use than that of children's toys, and it is easy to

see that the restrictions as to exact weight and bouncing power which are necessary when the ball is required for tennis do not come into prominence when the ball is used only as a plaything; hence the preference for making the latter class of goods.

* * *

THE October meeting of the Rubber Manufacturers' Association was held at Birmingham. The meetings have hitherto been held at Manchester, as the best center for London and Scotland, but of course there was a feeling among the northerners and southerners that the convenience of the Manchester firms was being unduly considered. This association, which exists for the purpose of regulating the prices of mechanical goods so as to prevent ruinous competition, is working successfully, and of course has nothing in common with the proposed combination of which mention has already been made, and about the prospects of which it should be possible to know something definitely next month.

OTHER RUBBER INTERESTS IN EUROPE.

A GERMAN VIEW OF SOLID MOTOR TIRES.

THERE was held recently in Berlin an automobile exhibition which, by all accounts, was a successful affair. But while announced as an international affair, and although vehicles of foreign makes were shown, it appears that practically the only exhibitors of tires were German manufacturers. The *Gummi-Zeitung* gives the "impressions of a rubber man" who saw the exhibition, in part as follows:

"In our branch, the Continental Caoutchouc und Guttapercha Co. is best represented, but, like the others, only with pneumatics, to which they give their special attention. The Vereinigten Berlin Frankfort Gummiwarenfabriken, Franz Clouth, Carl Schwanitz, and Louis Peter have also fine collections of tires and other accessories on exhibition. Metzeler & Co. are represented, but chiefly with pneumatics for bicycles. We find the pneumatic tire predominant everywhere. Several foreign motor vehicles on the other hand, are mounted with a very good solid tire, giving the vehicle a pleasing appearance. A number of vehicles of German manufacture, with solid tires, are on exhibit, their tires being vulcanized with hard rubber to the iron tire direct, a procedure which to me seems not commendable.

"In my opinion the solid tire will rule the future, while the pneumatics are adapted best for smaller locomotors, more so as the pneumatic absorbs about 20 per cent. more power than the solid tire. This is a fact which must not be underrated, especially when electrically driven wheels will have been generally adopted, which seems to be the best system, as benzene and petroleum motors fill the streets with unpleasant odors. We hope that the next automobile exhibition will bring further advances in this new industry, which the rubber interest watches attentively, they being closely allied."

The Continental company received an award, for their "Continental" motor tires, of a silver medal—the highest award made for motor accessories.

REDUCED DIVIDENDS OF A GERMAN COMPANY.

THIS year's dividend of the Vereinigte Gummiwarenfabriken Harburg-Wien vorm. Menier—J. N. Reithoffer amounts to only 12 per cent. Hitherto the yearly dividend has been at least 20 per cent., while last year it was 24 per cent. and the year before 29 per cent. THE INDIA RUBBER WORLD'S Berlin correspondent writes that the smaller dividend is due to 250,000 marks of the past year's profits, in the shape of new shares,

having been devoted to the purchase of a plant at Linden-Hanover, from the Continental Caoutchouc und Guttapercha Co. There is to be considered also the fact of the company being obliged to pay higher prices for crude rubber, while no advance has been made in the prices of products. Furthermore, the state of the Austrian trade has been unfavorable, owing to the increasing competition in that direction. On the Berlin bourse the shares of the Harburg-Wien company were quoted lately at 245, against 350 at the beginning of the year.

NOVEL SUIT AGAINST A RUBBER COMPANY.

THE India Rubber, Gutta Percha, and Telegraph Works Co. (Silvertown) were sued in Dublin recently by William Cameron on a novel complaint. The plaintiff claimed damages for breach of contract to manufacture and sell a pneumatic shin pad, and to pay the plaintiff a royalty of 10 per cent. The amount of the claim was £50,000, this being arrived at by calculating that there are a million football players, and each pad would sell at 4 s.

DEATH OF A RUBBER MAN.

JAMES TULLO, of Thornton & Co., Limited, rubber manufacturers and merchants of Edinburgh, Scotland, died September 21, at the age of fifty-five. He had been connected with the firm for thirty years—first as their principal traveler, then as partner, and, since they became a limited liability company, joint managing director. Besides being a good business man, Mr. Tullo was a public spirited citizen, and at various times filled positions of importance in connection with municipal affairs.

NEW FACTORIES ON THE CONTINENT.

THE Austrian government has granted a concession to the Union Bank of Vienna, Messrs. Boschau & Co., and others for a new rubber factory, with an authorized capital of 4,000,000 crowns (= \$800,000), of which 1,600,000 crowns have been paid in. A large factory has been erected at Oberwaltersdorf, near Vienna, equipped with English machinery, to make mechanical goods, toys, and shoes, and also insulated cables.

Another concession was granted by the government for a new rubber and asbestos factory at Vienna, under the name "Asbestos and Rubber Works, Calmon," in connection with Asbest und Gummiwerke, Alfred Calmon, Aktiengesellschaft, of Hamburg. The capital carried is 1,000,000 crowns (= \$200,000), which may be increased to 4,000,000.

RUBBER COLLECTION AND CULTIVATION.

RUBBER PROSPECTS IN SOUTH BRAZIL.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In reply to your inquiry regarding a company formed at Rio de Janeiro for the cultivation of maniçoba or mangabeira rubber, I have been unable to obtain any information on the subject. I do not think that there is anything of the kind, either here or in Sao Paulo, money being too scarce for the formation of any companies at all. I have inquired at several banks, but none know anything about it. At the same time, many planters, disgusted with the low prices of coffee, have been planting maniçoba on a large scale. On this subject I may be able to give some information later on. There are many sources of rubber supply yet untouched, but capital is extremely scarce in all parts of Brazil, except the Amazon district, which is booming.

By late papers from Pernambuco I notice that shipments of mangabeira rubber were made from that port, between August 9 and 23, of 1400 kilograms to London and 1973 kilograms to New York.

J. P. WILEMAN,
Editor *The Brazilian Review*.

Rio de Janeiro, Brazil, September 7, 1899.

RUBBER PRODUCTION OF MEXICO.

CORRECTED complete returns which have now been received of the exports of crude India-rubber from Mexico during the fiscal year ending June 30, 1899, afford the following details of the output for each port. These figures have been prepared

Ports.	1897-98.	1898-99.
Acapulco.....	1,021	1,311+
Coatzacoalcas...	861	4,464+
Frontera.....	29,324	27,037-
Isla del Carmen..	1,586	3,431+
Manzanillo.....	478	434-
Mazatlan.....	232	2,562+
Puerto Angel....	..	34-
San Blas.....	4,226	6,062+
Soconusco.....	13,869	30,378+
Tampico.....	3,325	3,130-
Tonalá.....	6,869	10,899+
Tuxpan.....	6,141	19,643+
Vera Cruz.....	19,508	73,203+
Total.....	87,420	191,588+
Total (pounds) 192,324		421,493+
[- Decrease. + Increase.]		

especially for THE INDIA RUBBER WORLD, through the courtesy of the chief of the statistical section of the Mexican treasury department. The exports for the twelve months covered by this report are not so large as was indicated by a preliminary report published in our September issue—owing to a typographical error occurring in the latter—but the increase over the figures for 1897-98, is considerably over 100 per cent. The interest which attaches to this statement is due to the fact that the increased output may be due to the appearance in the market of rubber from cultivated plantations. The exports are given in detail, in order to facilitate any investigation which may be attempted in regard to the sources of the rubber produced. The largest increase having been in the exports from Vera Cruz, which is in close proximity to the section in which the greatest activity has been shown in planting rubber, it may be found that a part at least of the increase has been due to shipments of cultivated rubber. THE INDIA RUBBER WORLD will be pleased to receive any indications that such is the fact.

MEXICAN RUBBER PLANTATIONS.

It is reported that M. H. Lewis, general manager of the Mexican Gulf Agricultural Co. (Kansas City, Mo.), who recently returned to Mexico after spending several months in the United States, has arranged for the organization of another company to operate in the Dos Rios district of the isthmus of Tehuantepec. It will be called the Dos Rios Planters' Association, and have a paid up capital of \$450,000 (gold). It is proposed to have 3,000,000 coffee trees and 500,000 rubber trees

planted by the end of 1900. Mr. Lewis will be the general manager of this company, also.—The Mexican Gulf Agricultural Co. was organized by Mr. Lewis in 1894, with \$50,000 capital. It is now paying dividends on a capitalization of \$300,000. The idea at first was to establish a coffee and rubber plantation for the original stockholders. Later the plan was adopted of selling small tracts, partially planted in coffee and rubber, to be cared for by the company until paid for, in installments. In this way 8000 acres have been disposed of, and, beginning with November 1, another tract of 4000 acres will be opened for sale in small tracts—30,000 coffee trees and 10,000 rubber trees to every hundred acres. There have been planted on the company's estates, it is reported, 2,000,000 coffee and 500,000 rubber trees. On June 15 last the Mexican Gulf company paid its stockholders a dividend of 30 per cent., and two days later increased its capital stock from \$100,000 to \$300,000, the entire increase being placed at par.

RUBBER YIELD IN MEXICO.

A NOTE on rubber cultivation in Mexico, by the owner of several plantations in that country, appearing in a late *Tropical Agriculturist* (Colombo), concludes thus: "I do not think the *Castilleja elastica* ought to be tapped till in its eighth year to avoid injuring the tree, nor do I think that planters ought to effect such fabulous yields as five or more pounds per year, as some enthusiasts promise. Here we generally make the safe estimate of one or two pounds of rubber per year, and rather the former than the latter."

WEST COAST OF AFRICA.

THE wealth of rubber in the Gold Coast Colony, whence comes the Accra sorts, is referred to as affording an important inducement toward the construction of some short lines of railway to facilitate transportation from the interior of that country. The development of gold mining, the palm oil trade, and the shipment of lumber also are considered. *La Gazette Coloniale* (Brussels) publishes a map of important concessions of lands granted to the "Chemins de Fer de la Cote d'Or."

The following firms, located in the Gold Coast Colony, are mentioned in *Deutsche Gummi-Industrie* (Dresden) as exporters of India-rubber, either exclusively or in connection with palm oil, mahogany, etc. They are classified by ports:

Accra—J. H. Cheetham, G. A. Hansen, Baseler Mission Faktorei, Thomas P. William & Co.

Addah—Bremer Faktorei, Mante Frères et de Regis, Aive & Borilli.

Axim—B. D. Coker.

Cape Coast—H. W. B. Russell & Co., Pickering & Berthoud, Theodore Schenke, Thomas Addaquaé & Sons; Alexander Miller, Brother & Co.; The African Association, Limited; The Colonial Rubber Estates, Limited (concessionaires for the cultivation of rubber); J. H. Fisher & Co., Limited.

Chama—The Abanta Co., Limited.

Quittah—Boedecker & Meier.

Wanchi—The Ashantee Development Syndicate.

BRITISH CENTRAL AFRICA.

A GREAT deal of rubber is being collected by coastmen and natives in the North Nyasa district [says the *British Central Africa Gazette*]. The bulk of this is sold to an Arab named Mrambo, in German territory, who gives a higher price for it than any of the European traders.—The African Lakes Corporation, Limited, at Blantyre and Chinde, East Africa, are

mentioned as buyers of rubber from the Nyasa country. — Samples of the rubber vine from West Nyasa have been identified at Kew as the *Landolphia florida*. — Rubber gathered in the Mlanje district, British Central Africa, was exhibited in the vegetable products section of the Mlanje show this year. It was gathered from *Landolphia* vines and is reported to have been of fair quality. A solution for mending tires, made from the same grade of rubber, was also exhibited.

GERMAN WEST AFRICA.

THE exports of rubber from the German colony of Cameroon, West Africa, for the fiscal year 1897-98 reached 969,738 pounds, valued at 1,177,715 marks. The largest export before had been 910,800 pounds, in 1893. Both the government and private agencies are now exerting themselves to induce the natives to exercise more care in gathering rubber, so as not to injure the vines, and also to plant new rubber vines and trees. Thus Herr Schlechter, an authority on colonial planting, was commissioned recently to introduce the Lagos rubber tree into Cameroon, with the result that 40,000 seeds were planted, most of which sprouted, and the new plants are thriving. The four companies established in Yaunde are reported to experience difficulty in securing enough porters to carry their rubber to the coast.

BELGIANS INTERESTED IN MATTO GROSSO.

THE development of the Brazilian state of Matto Grosso has attracted favorable attention of late in Belgium, particularly on account of the rubber forests which exist there. *La Gazette Coloniale* (Brussels) contains a map of the state, showing the location of the concession (embracing 227,240 acres, or 355 square miles) of the Cie. des Caoutchoucs du Matto Grosso, formed in November, 1898, with a capital of 1,000,000 francs. Osterrieth & Co., and Emile Grisar, of Antwerp, are interested. Another Belgian company operating in the same state is the Produits Civils, founded in 1895, with a capital of 5,000,000 francs. Rubber has been exported from Matto Grosso for several years past, the *Gazette* mentioning about 230 tons as the extent of the yearly production. The rubber is the product of species of *Hevea*, and the methods employed in its collection presumably are similar to those of the Amazon districts. One outlet of the Matto Grosso rubber field is through the Tapajos into the Amazon.

SOUTHEASTERN BRAZIL.

THE current crop of maniocoba rubber, according to recent reports from Ceará, is expected to be large. Many of the Baturité planters are reported to be abandoning coffee with a view to setting out rubber. During the first half of the current year 17,045 Cearenses embarked at Fortaleza (Ceará) for the upper Amazon regions, to engage in gathering rubber.

On an estate in the municipal district of Crato, in the state of Ceará, there is said to have been discovered recently a maniocoba rubber forest covering eleven square leagues.

A Bahia newspaper reports that about 3000 persons were collected at Formosa, on the Rio Preto, gathering rubber.

VARIETIES.

THE journals of Pará, says *Le Brésil* (Paris), state that an American syndicate, engaged in the collection of rubber in the upper Amazon, has been making shipments to the United States by way of Venezuela, in order to avoid the Brazilian export duties.

—The cultivation of Ceará rubber, in connection with vanilla, is being undertaken in the French colony of New Caledonia, to replace coffee.

—The Cie. des Produits du Congo, of Belgium, have planted 30,000 seeds of the Pará rubber tree (*Hevea Brasiliensis*) on the Congo river.

SOME WANTS OF THE RUBBER TRADE.

INQUIRIES.

[68] AN inquiry comes from a firm interested in the hard rubber industry for the address of manufacturers of the machines used in cutting combs.

[69] A firm of uniform manufacturers write for the addresses of rubber proofers, stating that they need a considerable amount of proofing done.

[70] A rubber manufacturing concern write: "Can you inform us where we can purchase the cambric necessary for the manufacture of nursery sheeting?"

[71] "Could you please place us in communication with the parties who manufacture soft rubber cigar holders?"

[72] "Will you give me the address of some good cotton seed oil producer?"

[73] "Please send address of some manufacturer or dealer in cellulose."

[74] "Will you kindly send us the address of a good manufacturer of hose machinery?"

[75] "Can you kindly inform us where we can purchase elaterite and gilsonite; also where we can purchase lanoline or French wool grease, and the addresses of parties handling lanichol?"

[76] "Please inform me who manufactures waterproofed venetians, or cloths, or deals in the same. Are these new goods a cravenette?"

ANSWERS.

[62] TO THE EDITOR OF THE INDIA RUBBER WORLD: Tell your correspondent who wants to vulcanize rubber to copper plated goods to first soak the copper plates in water hot as possible. Take them out and dry them, and soak in the best muriatic acid he can get, dissolving a sliver of zinc in the acid. Then cement the plates thoroughly, and when they are dry cement them again.

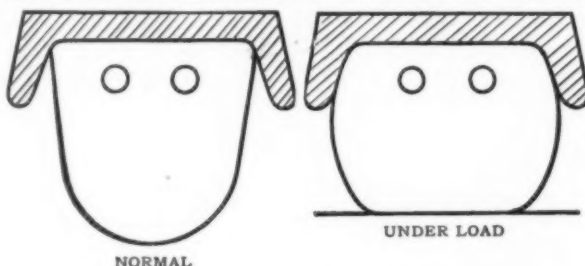
WILLIAM MONTAGUE.

No. 251 Park street, Hartford, Conn.

[66] William Montague, Hartford, Conn., offers to give information in regard to cutting up bicycle tires as finely as may be desired.

LANGMUIR PATENT CARRIAGE TIRES.

THE V shaped spaces between the solid rubber in this tire and the flanges of the steel channel rim are intended to prevent the rubber from cutting out at the base, from splitting



or scalping, or from opening at the joint. The two illustrations shown here illustrate the effect upon the rubber of placing the tire under load, as compared with the normal shape of the rubber. These tires are made in ten sizes, running from $\frac{3}{4}$ inch to 2 inches. They can be applied by any two wire system. A complete outfit for applying all sizes is supplied for \$10, and carriage makers can put them on in their own shops. [Revere Rubber Co., Boston and New York.]

HEARD AND SEEN IN THE TRADE.

THE two exhibitions of the carriage trades during the month, at New York and Indianapolis, were of much interest to a rubber man as indicating the rate of development of the use of rubber in a field which has existed scarcely more than five years. In the days of the big cycle shows a cycle tire manufacturer sometimes exhibited a carriage tire—generally a pneumatic—which was regarded by the public as a curiosity. At the carriage dealers' exhibition scores and scores of vehicles were shown, a large percentage equipped with rubber tires. Although the exhibitors were from every section of the country, nearly every one showed rubber tired vehicles. There were great tire manufacturing companies represented, also, with a great variety of products—solid tires for the lightest road wagon, and for the heaviest automobile, with all sorts of contrivances for holding them in position. There were pneumatic tires, too, some as large as five inches in diameter, and listed as high as \$74 each. Besides, various rubber accessories for vehicles and harness were shown, all of which are of recent invention. Long after the rubber industry had come to be considered important the whole production was small as compared with the output of carriage tires alone to-day.

ONE can well say of the carriage tire trade that there are "millions in it." One concern which in one year sold \$4,000,000 worth of cycle tires was represented at the recent exhibitions by a notable display of tires, and one of the half dozen business-like salesmen in attendance told me that the vehicle tire branch had already outstripped cycle tires in importance. One of the vehicle tire manufacturing concerns making an exhibit is capitalized at \$10,000,000 and another at \$3,000,000, and there were others represented that have all the capital that they need. One of the biggest concerns in the whole trade was not represented at all.

I WAS told by one of the representatives of the company manufacturing rubber hub rims for vehicle wheels that this device has been adopted by every fire department in the United States, and that it is being introduced abroad. It is also coming into demand for carriage and wagon wheels. Altogether the business has proved very successful.

"WHEN I first became interested in dress shields," said a rubber man, "the consumption of such articles was nowhere large, and practically all those sold in America were still imported from Europe. The development of the business to large proportions first occurred in America, however, and manufacturers here soon gained control of the trade. While the consumption of dress shields everywhere has increased enormously, the production in Europe has never become relatively important. Hence, instead of importing such goods, America has become a large exporter. Yet the condition of the trade is not satisfactory. Not only has there been a great deal of competition between the larger producers, resulting in the lowering of prices, but the smaller concerns have affected the situation. The beginner in this branch of trade, as in almost any other line of production, starts with the idea that in order to obtain orders he must offer lower prices than are prevailing at the time. He may deliberately undertake to sell goods without a profit, on the idea that in no other way can he secure so much

business with the same expenditure. Well, the large concerns have not permitted this sort of price cutting to proceed far without doing something to counteract the effect. In other words, concerns which might have been expected to depend upon the reputation of their goods to keep a sufficient share of the trade in hand, have not hesitated to cut prices in order to prevent the newer manufacturers from gaining too great a foothold. The result is that a large amount of business has been done without an adequate margin of profit."

"THERE is one thing that has hurt the trade in dress shields," I have been told, "that may not have occurred to you. It is the fashion of wearing shirt waists. A great many of these are low in first cost, and are laundered frequently, and for these reasons are made without dress shields. It has made a real difference in the dress shield business to have such garments displace the former styles of ladies' dresses, in which shields were regarded as indispensable."

THE dress shield business has been invaded suddenly from an unexpected quarter. I have seen lately some dress shields made of a specially twilled silk, treated by the pegamoid process. It certainly was very light in weight and less in bulk than any other shields I have seen. The further claims made for it are that it will wash and that it is wholly inodorous.

No doubt there is a pot of money in sight for whoever can control the lion's share of the dress shield trade, whether rubber continues to figure in the production or not. Millions have been made in the trade already, as everybody knows. Yet one cannot help smiling at the thought of the dress shield proving perhaps the most lasting monument to the distinguished promoter who first introduced pegamoid to America. It is too bad that the magnificent suite of offices on lower Broadway, decorated at a cost of \$25,000 to further his "demonstration" of the merits of pegamoid, could not have been made permanent. The New York people ought to have raised a fund to keep such magnificence from fading from view. Whoever ventured into that imposing establishment, to consult the chief promoter, was sure to hear that he was "very busily engaged" in some inner sanctum. While awaiting his pleasure the visitor would be conveyed from room to room by some guide well coached in a lecture on the \$25,000 decorations. Finally would come the message, spoken with impressiveness and suavity, as if one were about to be ushered before royalty: "Your patience shall now be rewarded; Mr. Byers can see you!" And the sum of the great man's talk invariably was that pegamoid was the greatest thing on earth, and that the use of rubber and a good many other things would soon show a falling off. But Mr. Byers didn't stick to his text. I wonder if he remained true to pegamoid long enough even to see it applied to dress shields.

ALL reports agree as to the unusually large volume of the rubber trade this year; the next question has to do with how long this is to continue. Recently I have talked with several men from the upper central west and northwest, and all of them are hopeful of the future. Said one large jobber: "At first, when the heavy trade of the current year began, I thought that we were selling to empty stores, and that when stocks were replen-

ished our sales would begin to fall off. But our salesmen assert that the present year began with fuller stocks than usual, and that our good business has been due to a legitimate growth in the demand for goods. Not only is there a greater call for rubber goods than we have ever known before—and his house carries about everything in rubber—but the people are buying goods of better grades. My salesmen assure me that the conditions which have come under their notice point to as great an increase in business next year as we have shown this year over last year."

* * *

ON the day before the beginning of the Dewey celebration in New York I met some traveling salesmen of a western rubber house, and saw their employer, who also had come east to see the big demonstration, making arrangements for them to see everything on the public program. That was good business. Those salesmen went back to their work far better prepared for a welcome from possible customers who were unable to visit New York on that occasion, but who will long feel like hearing about the Dewey reception, than other salesmen who were kept on the road all the time. And it was good business for the employer to show the personal interest in his salesmen which this attention indicated. It would have been a good investment at double the cost.

* * *

"I DON'T know whether you are familiar with the details of selling rubber goods," said a traveling salesman for a jobbing house in rubber footwear, "but I have lately sold \$40,000 worth of goods in forty days, and I consider that good business, considering that my field is an agricultural state. It has been the best year in this line that I ever knew."

* * *

EVERYBODY who is making any effort to get a share of the export trade which is growing up in the United States seems to be meeting with some success. The head of an insulated wire concern which has not yet been mentioned in print in this connection informs me that \$25,000 worth of his company's wires are already in use in Manila.

* * *

THE American Wringer Co. are shipping their machines all over the world. They make liberal use of pictorial advertising matter in making the wringers known abroad, for the reason that until such articles become known in any country it is impossible to describe them, without pictures, so as to be understood. A very handsome lithograph has been issued by the company, with the descriptive matter in Russian. No doubt a similar policy would prove of value to exporters of many other lines of rubber goods.

* * *

WHEN I complimented a member of a rubber firm upon the appearance of their latest catalogue, he said that they believed that it paid to make their printed matter as attractive as possible. "There is not a new item listed in that catalogue," said he; "not a thing with which all our older customers have not been familiar with for years. Yet it was only a few days after this catalogue was sent out when the mails began to bring us orders for the goods. Evidently our friends were so pleased with the appearance of the little book which we had gotten up to remind them of our goods that it made them feel like buying, and they sent in their orders while they still felt interested."

THE MAN ABOUT TOWN.

INDIA-RUBBER formed the largest item of export from Madagascar during 1898. The reported value was 1,290,028 francs, against 1,101,200 francs in 1897.

TO DEVELOP RUBBER IN BOLIVIA.

MR. LOUIS A. RICHTER, a commissioner of colonization and commerce for Bolivia, was a recent caller at the offices of THE INDIA RUBBER WORLD, before sailing from New York to Europe, where he hopes to interest capitalists in the opportunities which would be developed for making money from rubber and other products in Bolivia in case the projected railway around the falls of the Madeira should be constructed. Mr. Richter explains that the initial cost of such a railway will be much greater than the usual cost of a new road through a level country. One reason is that, on account of the great luxuriance of the vegetable growth along the Madeira it would be necessary to ballast the roadway in order to prevent it from being speedily overgrown, and there is nowhere convenient any stone or other material convenient for ballasting. Mr. Richter believes that this reason alone has been sufficient in the past to prevent the building of the road, but, with the growing demand for rubber and for other natural products which abound in Bolivia, he thinks that it would now be feasible to carry out the project.

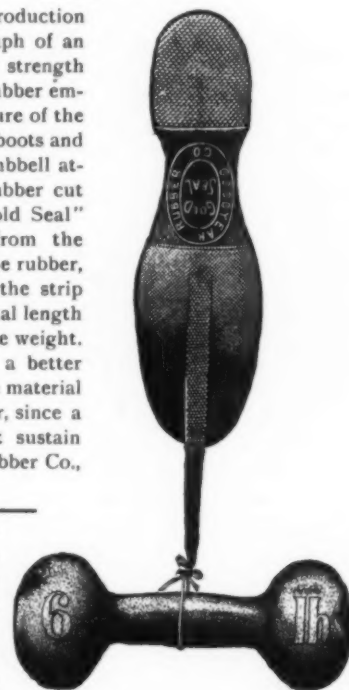
TEST OF RUBBER IN A SHOE.

THIS picture is a reproduction from a photograph of an actual test showing the strength and elasticity of the rubber employed in the manufacture of the "Gold Seal" brand of boots and shoes. A 6 pound dumbbell attached to a strip of rubber cut from the sole of a "Gold Seal" shoe and separated from the fabric failed to break the rubber, in addition to which the strip contracted to its original length upon the removal of the weight. There could hardly be a better test of the quality of the material used in rubber footwear, since a cheap article would not sustain the test. [Goodyear Rubber Co., New York.]

IN discussing the equipment of bicycles for the season of 1900 *The Wheel* (New York) says: "Tires of 1½ and 1¾ inch will continue popular, about dividing the call between them.

In the East the growth of single-tube prestige is unquestionable. The double-tube has always controlled the West, and many riders and dealers are bitterly against the single-tube, but the latter is nevertheless gaining, among those who fancy it, because of its apparent if not actual simplicity."

THE *Gazette Coloniale* (Brussels) for September 17 contained a map of the Congo Free State, showing the location of the thirty-six factories, posts, and agencies of the Société Anonyme pour le Commerce du Haut Congo, through which are exported a large proportion of the Congo rubber output. This is the largest company operating in that region.



AKRON RUBBER WORKS ELECTRICAL PLANT.

THE B. F. Goodrich Co., of the Akron Rubber Works (Akron, Ohio) are introducing an electrical power plant to take the place of their present steam drive. In New England, where fuel is expensive, electricity is largely applied to manufacturing industries, but to find in the heart of the coal regions electricity substituted for steam, is somewhat of a novelty, and shows that the electrical system has other features to recommend it beyond the fact of economy in fuel consumption.

The Goodrich company have been operating a factory which has grown from time to time, the power for the additions having been secured from steam engines placed where the power was required, and the supply of steam has been mainly from a large battery of boilers, supplemented by other boilers situated in different places. This has been an evolution which has come about from the small additions frequently occurring. An extension is about to be made to the factory, covering a considerable additional area, and this has necessitated an additional steam plant. The problem arose whether to add to the boiler plant, or to consolidate all the steam generating apparatus into one central power house, and then distribute the power to the factory electrically. It was found that the latter method was the most economical and it has been adopted.

Current for the lighting of the factory has been supplied from dynamos of small sizes, placed at different points. Eight or ten different machines of small sizes and various makes have been employed. These will be discarded and the lighting and power all taken from a common system.

The Westinghouse Electric and Manufacturing Co. will supply the entire electrical equipment, which is being installed under the direction of Mr. E. C. Shaw, electrical engineer to the Goodrich company, with whom many of the ideas embodied in the plant are original. The electrical apparatus is already well advanced, and the early spring should see the plant in operation.

The engine and boiler houses will be of steel construction; the former 130 × 80 feet, with coal bunkers overhead having a capacity of 800 tons. The boilers will aggregate 3000 horse power, and be equipped with mechanical stokers and coal conveyors, to secure economy in labor and fuel consumption, and also smokeless combustion.

The engine room will measure 124 × 50 feet, and contain three compound condensing high speed Corliss type engines, direct-connected to three Westinghouse two-phase generators; two of which will be of 500 kilowatts, and one 150 kilowatts. The three generators will be arranged to work in multiple. This central power station will supply the electric lighting system throughout the buildings, and furnish power to about 60 Westinghouse type "C" induction motors scattered over the departments of the works. A very elaborate switchboard has been built by the Westinghouse company, to provide for the multiple running of the generators, and to control the circuits of lighting and power. Each power circuit will be furnished with a two-phase Westinghouse integrating wattmeter to register the exact amount of power used by each department of the works. The engineer in charge will be able to read the total amount of power supplied.

About 60 motors will be installed, varying from 1 to 300 horse power, with an aggregate capacity of 2000 horse power. Some of these will be attached directly to individual machines such as tube mills, calender rolls, elevators, etc., each machine having its separate motor. The lighter machines will be connected by belts to shafting, and a single motor will drive a group of them. The type of motor used affords great advan-

tages for factory work, as it is virtually automatic, requiring nothing but an oil supply once in three months; an unskilled attendant can operate them, and having no commutator or brushes, there is no sparking, or danger from fire, even when working among inflammable or explosive materials. The motors can be bolted to beams, or stood upon a platform, or placed in any position where they occupy no valuable space.

The primary object in this departure by the Goodrich company, is to secure the economy in operation which an electrical drive affords. Sixteen separate steam engines will be supplanted, and the power plant concentrated under one roof. In an immense factory like that of the Goodrich company it is very costly to operate separate steam engines, as the loss by condensation and leakage of steam pipes is a serious item. Under the new system, electricity will be carried by feed wires to all parts of the works and converted into mechanical power by electric motors. Experience in many industries has shown that the electrical drive economizes three-fourths of the power that was required for operating separate steam engines. Another signal advantage of electrical operation is its flexibility as to extensions, which can be effected by simply adding further generating units and the necessary additional wire feeders.

RUBBER AT THE CARRIAGE SHOWS.

THE sixth annual exhibition of finished carriages, harness, and accessories, in connection with the yearly convention of the National Carriage and Harness Retail Dealers' Association, held in New York on October 16-21, was not only larger and better attended than any in the past, but it contained more and better exhibits by rubber manufacturers, and more indications of the growing use of rubber as accessories in carriage and harness making. Three floors of the Grand Central Palace were devoted to the exposition. A large percentage of the vehicles shown were equipped with rubber. Several leading tire concerns had extensive and interesting rubber exhibits, and were represented by an army of competent and energetic salesmen.

The Victor Tire Co. showed their patent solid carriage tires. The Rubber Tire Wheel Co., who now form a part of the Consolidated Rubber Tire Co., exhibited solid tires for all kinds of vehicles, including automobile tires held in place with four longitudinal wires. They are also offering now a round cushion tire. The International Automobile and Vehicle Tire Co. (lately the Chase and Reading companies) exhibited their "Sectional" and "Apex" tires, both in sizes for automobiles as well as for smaller vehicles. The Diamond Rubber Co. and the Goodyear Rubber and Tire Co. both showed vehicle tires of all sizes, but only in the pneumatic form. The Hartford Rubber Works Co. exhibited pneumatic tires. Morgan & Wright showed solid and pneumatic tires. The New England Rubber Tire Co. showed a solid tire with a special patent fastening. The India Rubber Co. showed solid and pneumatic tires.

The Empire Rubber Manufacturing Co. made their first bow to the trade as makers of vehicle tires, showing pneumatics. The Revere Rubber Co., though they have given up bicycle tires, are making solid carriage tires, under the Longmuir patent, which they exhibited. The Whitman & Barnes Manufacturing Co. showed their "Easy" solid tires, and rubber padded horseshoes. Several carriage builders also showed solid tired wheels as a specialty, as the Meeker Manufacturing Co. and the Premier Manufacturing Co. The Pneumatic Wheel Co. were also in this list.

The Fairfield Rubber Co., represented by both the Messrs.

Harral, had a very complete line of rubber carriage cloth. The Canton Hard Rubber Co. showed rubber specialties for the harness trade. Ford's rubber hub rim was on exhibition, and also the products of the Rubber Step Manufacturing Co. Arthur W. Pope & Co. had an extensive exhibit of Pegamoid carriage cloth and upholstery leathers.

The following is a list of the representatives of most of the companies named above who were in attendance:

The Victor Rubber Tire Co. (Springfield, Ohio)=John G. Webb, secretary and general manager; Albert T. Holt, superintendent rubber factory; W. S. Huffman, eastern sales manager.

The Goodyear Tire and Rubber Co. (Akron, Ohio)=Charles W. Seiberling, secretary; F. A. Seiberling, general manager; J. A. Aldrich, eastern representative; O. L. Weaver, from the Akron office.

Revere Rubber Co. (Boston)=William Hillman, New York manager.

The India Rubber Co. (Akron, Ohio)=F. A. Palmer, assistant secretary; D. B. Nally and L. F. Stilwell, New York representatives; M. W. Sabin, Boston representative.

Morgan & Wright (Chicago)=William Nash, A. C. Farnsworth, C. M. Cordell, J. S. Beatty, W. N. Marion, C. McKennie.

International Automobile and Vehicle Tire Co. (Boston)=W. H. Lent, H. B. Hall, Fred W. Suhr.

Whitman & Barnes Manufacturing Co. (Akron, Ohio)=D. D. Martin, eastern representative; Cris. E. Wilson, from the Akron office.

Consolidated Rubber Tire Co. (New York)=V. H. Cartmell, manager, and F. E. Holcombe, from the New York office; F. A. Kissell, Philadelphia manager.

The Diamond Rubber Co. (Akron, Ohio)=W. B. Miller, O. J. Woodward, Osborne Tweedy.

William J. Cable, of the Cable Rubber Co., was in attendance during part of the week, but not as an exhibitor. Most of the exhibits mentioned were transferred, at the end of the week, to Indianapolis, and appeared later at the exhibition held in connection with the Carriage Builders' National Association.

STATISTICS OF FIRE HOSE.

UNDER an act of the United States congress requiring the national department of labor to collect certain statistics of administration pertaining to cities having a population of 30,000 or over, such a canvass has been made, the results of which appear in No. 24 of the department "Bulletin." The number of cities having a population estimated at 30,000 or more on January 1, 1898, was 140.

The fire equipment of the various cities was one of the subjects of investigation. According to the figures given in the "Bulletin," the 140 fire departments owned, on January 1, 1899, no less than 3,361,160 feet of hose. Fire hose is guaranteed for three years, as a rule, and, assuming that this represents nearly the average life of hose in service, these figures would indicate a yearly demand for 1,000,000 feet to replenish the stocks of fire departments. The cities credited with more than 50,000 feet of hose are as follows:

New York.....	600,000	Baltimore.....	72,225
Chicago.....	195,809	San Francisco.....	67,900
Boston.....	150,430	St. Louis.....	61,500
Philadelphia.....	90,000	Milwaukee.....	60,000
Buffalo.....	86,530	Detroit.....	59,575
Pittsburgh.....	80,000	Cincinnati.....	56,000

Much remains to be explained in regard to these statistics. For instance, a letter received lately by THE INDIA RUBBER WORLD from the fire department of the city of New York stated: "The number of feet of hose in service on December 31, 1898, was 138,850." Yet statistics for New York published some time ago in THE INDIA RUBBER WORLD showed the

amount of hose owned by the New York department on January 1, 1895—three years before Brooklyn and other towns were taken in—to be 253,000 feet. It would be interesting to have the data upon which is based the amount of hose credited to New York in the table.

There naturally would be a difference between the amount of fire hose "owned" and "in service" in the larger cities. But this "Bulletin" makes no distinction save in one case. Boston is credited in the tabular statement with 94,886 feet, while a footnote reads: "Not including 55,544 feet in the storehouses." This gives Boston a total of 150,430 feet. No such analysis is possible in the case of the statistics for the other cities. This article may be closed with a list of cities credited with less than 5000 feet of hose each, as follows:

Nashville, Tenn.....	1,100	Augusta, Ga.....	4,400
Springfield, Mass.....	3,600	Canton, Ohio.....	4,500
Sacramento, Cal.....	3,950	Elizabeth, N. J.....	4,500
Springfield, Ill.....	3,950	Lancaster, Pa.....	4,800
Newport, Ky.....	4,300	Little Rock, Ark.....	4,900

MR. JOHN P. LYONS.

THE advertising expert of the United States Rubber Co. began his newspaper career as the editor of a high school paper in Jacksonville, Fla., where he is said to have acquitted himself exceedingly well—so well that later, when a student at Harvard, he wrote articles and verses which attracted attention, and in due time became one of the editors of the daily *Harvard Crimson*. After his graduation, he drifted naturally into newspaper work and accepted a position as literary and dramatic critic on the Boston *Commonwealth*. At the same time, he was doing similar work on the *Traveller* and the *Courier*, both well-known Boston publications. In addition to this, he did special work in the way of verses, paragraphs, and skits for *Puck*, *Judge*, and *Life*, and contributed stories to papers like the *Youths' Companion*. His column of "Pencilings" in the *Courier* gave him considerable reputation, as it was widely copied. While at this



work, he began to take on advertising writing, such as pamphlets and booklets, and also newspaper advertisements for the Boston dailies. When the United States Rubber Co. was formed, he was offered a position which gave him full charge of all of their advertising writing and catalogue work. In this he has shown great taste and ability, and also shown himself to be a great worker. During his connection with this company, he has become recognized by advertising periodicals as an expert in his line, and has contributed a number of articles on advertising which have been notable for their common sense and commercial soundness.

THE RUBBER FOOTWEAR TRADE.

RUBBER SHOE AUCTIONS.

THE decision of the United States Rubber Co. to auction no job lots of rubbers this season before January 1 will leave the trade this year without one interesting feature. For thirty years a Boston firm of auctioneers have offered regularly in November a collection of job lots, broken sizes, out of date, and imperfect goods from the various rubber shoe manufacturers, their sales being largely attended. As many as 2,000,000 pairs a year have been sold in this way. The sale of goods in this way doubtless has had an effect upon the sale of standard goods at regular prices, and it will be some protection to the regular trade not to have the customary auction lots thrown upon the market at the beginning of winter. Last fall John Wanamaker was a large buyer of the rubbers offered at auction, and the shoe departments of his stores were crowded for several days by buyers of rubbers at 15 to 25 cents a pair—many of whom probably would not have hesitated, under other circumstances, to buy standard goods at full prices. An interesting history of the Boston rubber shoe auctions appeared in THE INDIA RUBBER WORLD of April and May, 1892.

THE NEW MILLTOWN FACTORY.

THE Milltown India Rubber Co., incorporated July 27, with John C. Evans president, inform THE INDIA RUBBER WORLD that they have been able to buy the tract of land which they had in view at the beginning, together with right of way from the Raritan River railroad into the same. They at once began work upon plans and specifications for buildings and machinery, with a view to getting the main building inclosed before the first heavy snowfall. They expect to be making rubber shoes by the beginning of spring.

NO RUBBER FACTORY FOR COLLINSVILLE.

AN end seems to have come to the effort to establish a rubber shoe factory at Collinsville, Conn., for which purpose the Collinsville Rubber Co. were incorporated under the laws of Maine, June 2, 1899, by John G. Robinson, Melrose, Mass. Charles R. Tapley, Danvers, Mass.; and Alvin George, Boston. The capital named was \$500,000. The reason given by the prime movers in the matter was that the proportion of the capital which citizens of Collinsville were asked to subscribe could not be obtained there. The Hartford *Globe* says: "It was desirable to secure local stockholders with the end in view that the corporation would not have to carry a heavy burden in the matter of taxes. The fact has often been demonstrated that assessors in small towns are disposed to be lenient with corporations when all or a large share of the stock is in the hands of local men."

RUBBERS IN GROWING DEMAND.

"THE demand for rubber shoes is increasing," writes Mr. A. Schember, of the Terre Haute Rubber Co. (Terre Haute, Ind.), to THE INDIA RUBBER WORLD, "owing to the fact that the people are using lighter footwear, and in winter or bad weather are now obliged to wear overshoes." Mr. Schember was formerly in the leather shoe trade, but recently made a change, opening a wholesale house, under the style indicated above. The house carries rubber footwear principally, though some leather goods will be kept in stock. The rubbers carried include the Hood, Wales-Goodyear, and Narragansett brands. The fall business was good, but did not approach a "boom,"

owing in part to the effect of the drought upon the Indiana corn crop. Mr. Schember is reported by a local newspaper as stating that Terre Haute ought to command the rubber trade within a radius of fifty or sixty miles. Also that when retailers learn that rubber shoe prices have been made uniform by the manufacturers, and that prices are the same all over the country, so that goods may be bought as cheaply at Terre Haute as in Cincinnati or New York, they will no longer feel like sending their orders so far from home.

ECHOES OF THE FARGO FAILURE.

A FINAL decision has been reached in the complicated litigation growing out of the failure of the Chicago shoe firm of C. H. Fargo & Co., in 1896. When that firm became embarrassed their principal creditors, The United States Rubber Co. and The L. Candee & Co., attempted to arrange to keep the business going, by extending additional credit. The Metropolitan National Bank of Chicago became a party to the arrangement and made a loan to the concern, the rubber companies and the bank becoming preferred creditors. The Fargo house was finally forced to make an assignment, however, when the other creditors applied to the United States circuit court for the appointment of a receiver. Henry W. Bishop was appointed to this position, and after hearing his report Judge Grosscup decided that while the agreement above referred to was entered into without fraudulent intent, it was nevertheless fraudulent in law, and all the preferences and assignments were swept away, and a division of the proceeds among all the creditors ordered *pro rata*. The preferred creditors thereupon went to the United States circuit court of appeals, the decision of which was filed on October 3, having been prepared by Judge Brown, with Justice Brown, of the United States supreme court, concurring. It is to the effect that all the creditors not included in the preferential agreement are entitled first to be paid in full, after which any surplus may be divided among the preferred creditors. The claims of the unsecured creditors aggregate \$165,000, the largest being that of the American Oak Leather Co., whose action was based upon the plea that they had given credit to Fargo & Co. without any knowledge of the arrangement under which the latter were carrying on business.

UNITED STATES RUBBER CO.

AT their regular monthly meeting, in New York, on October 5, the directors declared the first quarterly dividend of 2 per cent. on the preferred stock for the current fiscal year, and the second quarterly dividend of 1 per cent. on the common stock, both payable October 1 to shareholders of record on October 14. The disbursement amounted to \$470,510 on the preferred shares and \$236,660 on the common. The transfer books, closed October 14, reopen on this date at 12 o'clock, noon.

RUBBER FOOTWEAR IN SWITZERLAND.

"WHEN I made my first visit to Europe, in the fall of 1891, I passed a few days here in Zurich. During that time I called on Veuve H. Specker, or as we would put it, the widow of H. Specker, who conducted a shoe store here, her husband having died the January before. Madame Specker is still in business here, but not leather goods; she gave that up as rather unprofitable a year or two later, and turned her attention to rubber goods exclusively. I found she was selling the Russian make, and when I asked her why she did not handle American goods

her reply was, 'American rubbers would not fit the feet of the people here.' I was shown some of the Russian make, a coarse, heavy, clumsy article for which \$1.20 was charged for men's sandals and 76 cents for women's croquets. On the other hand she sold American made rubber boots, as they were considered best and fit the feet. It occurred to me that some missionary work might be done in this section by our manufacturers of rubber footwear. Madame Specker is also manufacturing a line of rubber garments and sells all kinds of rubber goods, having a large trade in France, Germany, and Italy, which country she covers with salesmen from her wholesale department."—*Correspondence Boot and Shoe Recorder*.

AMERICAN RUBBERS IN EUROPE.

THE United States Rubber Co., according to our London contemporary, "have now on sale a new rubber cavalry boot made on English lasts, which, as a very showy line, is certain to be largely appreciated." Their London branch, under the management of John L. Knott, is referred to as having built up a large trade, and having always on hand a stock valued at \$100,000. "The demand for goloshes in this country [England] seems progressing favorably in consequence of the improved appearance of these goods."

A PLEASING RATE OF GROWTH.

A SHOE jobbing house in a western city has favored THE INDIA RUBBER WORLD with the following statement of the growth of their business in rubber footwear since the opening of the house:

In 1893	\$43,644.89	In 1896.....	\$ 64,603.30
In 1894	59,465.37	In 1897.....	125,119.92
In 1895	55,138.68	In 1898.....	158,939.13

Their rubber business for 1899, up to September 1, had amounted to \$185,219.55, with indications pointing to a continued growth throughout the year.

ELECTRICITY IN A RUBBER FACTORY.

THE L. Candee & Co., referred to last month as having installed a new electrical plant, were formerly the largest consumers of gas in New Haven. Seven years ago they adopted electric lights, supplied from their own generators. Their new plant will supply electricity for 3500 incandescent lights, 40 arc lights, and many motors located in different parts of the shops to do the work now accomplished with small engines.

DUTY ON RECLAIMED RUBBER.

THE official weekly publication issued from Washington, "Treasury Decisions," for October 5, contains the following copy of a letter addressed to the Diamond Rubber Co. Akron, Ohio):

(21631) RUBBER.

Treasury Department, September 29, 1899.

GENTLEMEN: Referring further to your letter of the 9th instant, I have to inform you that "reclaimed rubber," the product of rubber scrap, is subject to duty at 30 per cent, *ad valorem* as a manufacture of rubber, not specially provided for, under paragraph 449 of the act of July 24, 1897. Old scrap or refuse rubber which has been worn out by use and is fit only for remanufacture is free of duty under paragraph 579 of the same act. Respectfully,

O. L. SPAULDING,

Acting Secretary.

BORNEO has a railway, the first few miles of which are in operation from Weston, on the seacoast of British North Borneo. It is described as running through a splendid rubber country, and each train running toward the coast carries a little Gutta-percha to market.

NEW TRADE PUBLICATIONS.

THE GOODYEAR VULCANITE Co. (New York) issue an attractively covered new price-list, in two departments the first covering their extensive line of hard rubber combs and the second their hard rubber syringes and sundries. A convenient feature of this catalogue is a system of side indexing which facilitates ready reference to the different items embraced in it. A large number of illustrations add to the value of the publication. Myer Dittenhoefer, president of this company, has now been longer actively connected with the hard rubber industry than any other manufacturer now living, while the secretary and treasurer, Theodore E. Studley, has also been a rubber man beyond the memory of most people in the trade. [4½"×8¾". 54 pages.]

THE INDIANA RUBBER AND INSULATED WIRE Co. (Jonesboro, Ind.) have sent us a catalogue of India-rubber goods for mechanical purposes, including a great variety of molded specialties, for the manufacture of which they are particularly well fitted. It is fully illustrated. [3½"×6". 27 pages.] Also, their seventh annual descriptive price list of tires. They have added vehicle tires lately. [6½"×3¾". 12 pages.]

THE BOSTON BELTING Co.'s latest trade publication is a pamphlet, outwardly pleasing in appearance, and interesting inside as reading matter for all who are in any way concerned with the rubber trade and industry. On every page is a well executed small illustration of some detail of the production of crude rubber, the remaining space being filled with references to the varied line of mechanical goods manufactured by this long established and widely known company. The pamphlet concludes with a long list of the agents who carry the company's goods in stock, in the United States and abroad. [3¼"×6". 24 pages.]

THE JERALDS MANUFACTURING Co. (New York) are sending out a very neat souvenir of the recent yacht races, which gives a brief résumé of all of the international yacht races in which America has figured, from 1851 up to the present time. It also gives beautiful half tones of the various cup defenders, beginning with the *America* and *Aurora* and ending with the *Columbia* and *Shamrock*. Under each picture is a brief description of the boat. On the cover of the pamphlet is a raised likeness of the *America's* cup. The booklet is neat as well as most interesting.

FALCONNET, PERODEAUD & CIE. (Choisy-le-roi, France) send us a collection of circulars describing their patented "compound" rubber tire for carriages and automobiles, with a pamphlet of testimonials from users of the same. This is a solid tire, held by compression in the steel rim channel, but differs from other solid tires in being made of two parts—an outer body 2½ inches in diameter of firm rubber, with a core of soft rubber 1¼ inches in diameter. Imbedded in the outer section is a brass band with screws which pass through the wheel rim and are fitted with nuts. These tires are in use on a great number of automobiles. The firm wish to license manufacturers in the United States.

ALSO RECEIVED.

THE J. S. Toppan Co., Chicago=Railway and Manufacturers' Supplies [including rubber goods]. 8 pp.

C. J. Bailey & Co., Boston=Bailey's "Won't Slip" Tires. 4 p.

The Mechanical Rubber Co., Chicago=Rubber Tiling, Mats, and Matting. 8 p.

Falconnet, Perodeaud & Cie., Choisy-le-roi, près Paris=References relatives aux Bandages "Compound" pour Voitures et Automobiles. 14 p.

NEW GOODS AND SPECIALTIES IN RUBBER.

BAILEY'S SOLID "WON'T SLIP" TIRES.

ANOTHER tire patent has been granted to Charles J. Bailey. His first patent covered a pneumatic bicycle tire which has been on the market for two years, being manufactured by The B. F. Goodrich Co. (Akron, Ohio), and sold by dealers throughout the United States as the "Won't Slip" tire. The more recent patent covers the application of the same peculiar tread surface to any and every construction of tire—solid, pneumatic, or cushion. THE INDIA RUBBER WORLD is informed that tests have been made of tires equipped with the new tread on automobile carriages, and with satisfactory results. The advantage claimed for the new tire is that it gives perfect control of the vehicle under all conditions of road surface—wet asphalt, car rails, rough pavements, and the like. It prevents slipping or slewing. [C. J. Bailey & Co., No. 22 Boylston street, Boston.]

WILEY'S "ALASKA" SOCK.

THIS sock, lined with a high grade of wool, is referred to as having an advantage in being less thick than some others, and therefore less clumsy, so that it does not fill the rubber boot to an uncomfortable tightness. Yet it is heavier, thus containing really more substance than some other makes, and affording more warmth, with no discomfort. It will wash, and will absorb moisture without growing foul. Special attention is called to the fact that it is wool lined, and to the advantage which it thus possesses over socks lined with cotton or shoddy. The close weaving of the outside conduces to its durability in wear. It is used by men, women, and children, as a house, toilet, and bed slipper, as well as in connection with rubber boots. It is also recommended as a hospital slipper. Another special feature is the treatment with an antiseptic process, to prevent its being affected by the perspiration of the feet. The same firm manufacture three other grades of rubber boot socks—the "Brisco," "Yukon," and "Denmark." [William H. Wiley & Son, Hartford, Conn.]



ENAMEL INSULATED BRIDLE RING.

THESE insulators are designed for carrying groups of insulated wires to and along the walls of buildings and distributing them to subscribers' offices. New wires may readily be inserted and old wires removed from these insulators without injury. They can be screwed into the most difficult places with the hand and, when desired, can be unscrewed and used for other work. The cut is approximately half size. It is constructed of drop forged iron, the eye being 1 5/8 inches in diameter, and is heavily enameled to secure insulation. The side of the eye opposite the threaded shank is open, as shown in the illustration, so that wires may be slipped into place or withdrawn after the ring has been placed in position. [James S. Barron & Co., Nos. 24-30 Hudson street, New York.]



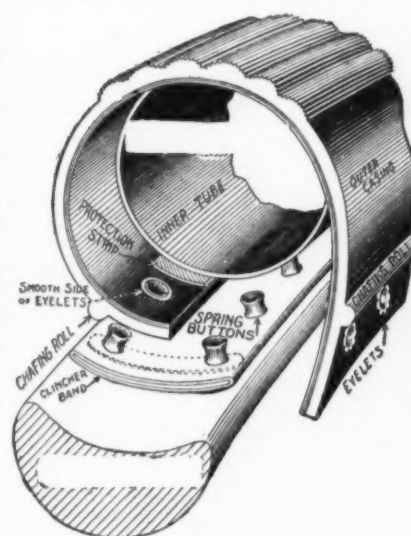
BERRY'S RUBBER HEEL.

THIS heel may be applied readily to any shoe, for the reason that it requires no shaping or paring on the side of either the leather or the rubber. Hence it both fits closely and looks neat. Reference to the cut will show how the surplus rubber may be removed, when the heel is too wide for the shoe, by cutting a section from the middle, instead of paring the sides. In other words, the sides are altered by slicing the surplus little by little out of the center. The heel is then squeezed inward until it conforms exactly to the form of the leather heel. The nails used in applying this heel when sunk, rest in a socket below the surface and are obscured from view. There is a vulcanized base which adds to the stability of the rubber heel, and also to the appearance and wearing qualities. The Berry heel is referred to as being desirable to carry in stock for the reason that fewer sizes are required than of some other makes, and also because less time is required for fitting it to leather shoes. It is made either all rubber or with vulcanized back, and in different sizes for men's and women's wear. The manufacturers invite requests for free samples. [The Berry Heel Co., Lees building, Chicago.]



THE WARNER DETACHABLE TIRE.

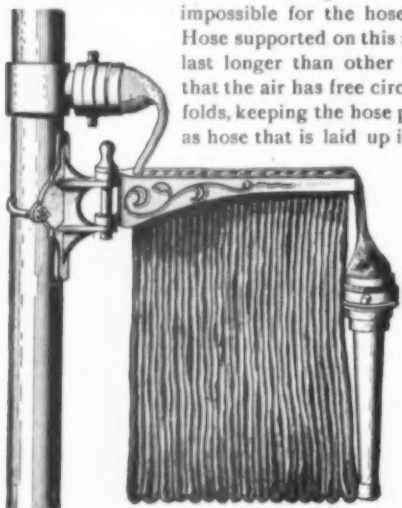
THIS tire is composed of three parts—band, tube, and case. The band is a strip of fabric with buttons folded and vulcanized into it and protruding through one side of it at a distance of about one inch apart. It can be fastened to any rim with cement or tacks. The tube is endless and is made of the best rubber and with latest improved valve stems. The case, or outer cover, is made flat, with eyelets along the edges, which are simply buttoned to the band on the rim. The principal points to be considered in relation to the Warner tire are: (1) The band is so constructed that without labor or tools, more than a few tacks or a little cement, it can be put on securely and it will fit any rim. (2) The chafing roll along the edge of the case effectually does away with chafing, a defect met in so many other tires. (3) The fact that the buttons are made on



metal plates extending across the band, from one side of the cover to the other, carrying all the strain, makes it impossible to split the rim. Not a pound of strain comes on the rim, and in this respect the Warner differs from other detachable tires. Once buttoned to the band, there is no pressure that can come to bear on the tire that will make it come off while in use. Yet it can be removed instantly by the hand, if desired. The Warner tire has been patented in the United States, Canada, Great Britain, and several continental countries. It is the invention of H. L. Warner, and is being made by The Warner Manufacturing Co., Dayton, Ohio, who report that they are receiving many orders, though the tire has not yet been advertised generally.

THE HOWARD SWINGING HOSE RACK.

THESE racks are made in widths to conform to the width of the different sizes of hose. The hose is supported on the rack by means of wood pins, 7-16 inch in diameter. The pins are shed from the rack in removing the hose, thus rendering it impossible for the hose to become tangled.



Hose supported on this rack, it is stated, will last longer than other hose, for the reason that the air has free circulation through the folds, keeping the hose perfectly dry, whereas hose that is laid up in box racks is liable to become damp from leaky valves and soon decay. The illustration herewith is from a photograph of 50 feet of 2 inch underwriters' linen hose on a 12 inch rack, the loops hanging down 18 inches. Nos. 1, 2, and 3 will carry respectively 50 feet, 100 feet, and 150 feet of the heaviest unlined linen hose. [H. J. M. Howard, No. 915 E street, N. W., Washington, D. C.]

THE "O. K." RUBBER HEEL.

THE principal features to be noted in connection with this heel are the small nail holes used in providing means for fastening it on, and the suction surface. It is made for all styles of shoes, men's and women's, gray or russet. All styles are offered to the trade at the same price—\$2.50 per dozen—and the manufacturers call attention to the opportunity for profits which these figures afford. [Franklin Rubber Co., Nos. 11-13 Franklin street, Boston.]



TAPE ARMORED HOSE.

A NEW tape armored hose patented by R. B. Black, managing director of The Rubber Co. of Scotland, Limited (at Forth), is claimed to be better than wire armored hose for use where it is subjected to much pulling about, as in railways, breweries, coach houses, gardens, and the like. It has an outer covering of woven tape impregnated with vulcanized rubber wound spirally around

its entire length. It is known as the "Forthvale" tape armored hose. The company have been manufacturing since the middle of 1898 and are reported to have met with much success.

O'SULLIVAN'S GOLF SOLE.

ANY shoe can be made a golf shoe by attaching a rubber sole to it. The O'Sullivan sole consists of a layer of pure rubber, $\frac{1}{8}$ inch thick from ball to toe, and $\frac{1}{2}$ inch from ball to heel, with five disks on the fore part $\frac{1}{2}$ inch high and $\frac{1}{4}$ inch in diameter. Golf heels are made with three such disks, two at the breast and one at the back of the heel. These rubber attachments are referred to as being capable of fitting any shoe. There are two prices—for men's and women's sizes. [O'Sullivan Rubber Co., Lowell, Mass.]



MEYER ORNAMENTAL CAPPED TOES.

AS another indication of the tendency to make rubber footwear attractive in appearance—and undoubtedly many persons in the past have hesitated to wear rubbers for esthetic reasons—attention may be called to the new "Meyer" line of ornamental capped toes, for men's and women's wear. The introduction of this line has proved a good stroke of business. It gave the manufacturers a distinct specialty—quite out of the ordinary run—and it gave the salesman a novelty to talk about and call attention to. These ornamental caps have appealed very strongly to the public taste, and as a result there has been a large demand for the Meyer shoes made after this pattern, as these ornamental caps give the rubber a dressiness that plain rubbers do not have. The shoes made with these ornamental toe caps are the men's self-acting over, women's croquet, and both men's and women's protection slipper. The illustrations herewith will make it clear why this new line has become recognized as among the handsomest rubbers in the trade. [Meyer Rubber Co., New York.]



WOMEN'S CROQUET.

PROTECTION SLIPPER.



WOMEN'S CROQUET.

DURING the international yacht races at New York two of the leading cable companies established an ocean telegraph station near the course, on the cable ship *Mackay-Bennett*. It was connected with the shore by a special double core cable. Despatches were received from tugs carrying newspaper men, and transmitted to the land offices. To insure the despatches against getting wet in handing them from the tugs to the cable ship they were placed inside small rubber footballs, which were then inflated and sealed. The entire service is understood to have proved quite satisfactory.

RECENT RUBBER PATENTS.

THE UNITED STATES RECORD.

ISSUED SEPTEMBER 5, 1899.

- N**O. 632,378. Vehicle Tire. Thomas D. Stewart, Chicago, assignor to the Heyer Storage Battery Co., same place.
- 632,432. Rubber Horseshoe. George J. Peacock, Pittsburgh, Pa., assignor of three-eighths to Harry V. Potter, same place, and Anna B. Peacock, Buffalo, N. Y.
- 632,468. Metal and Rubber Wheel for Vehicles. Henry A. House, Jr., East Cowes, Isle of Wight, England.
- 632,467. Cushion Heel. Charles H. Martin, Fredonia, N. Y.
- 632,529. Pneumatic Insole. Anton Korwan, New York city.
- 632,574. Wheel and Tire for Cycles or Other Vehicles. Frederick W. Jones, London, England, assignor of one-tenth to Edmund Walter Thurgar, same place.

ISSUED SEPTEMBER 12, 1899.

- 632,728. Syringe. Frederick J. Lander, Rochester, N. Y., assignor of one half to Mary L. Young, same place.
- 632,750. Conveyor Belt. John J. Ridgway, New York city.
- 632,786. Soft Tread Horseshoe. Henry Lagerquist, Des Moines, Iowa, assignor of one half to Charles Olsen, same place.
- 632,883. Dress Shield. Arthur C. Squires, New York city, assignor to the I. B. Kleinert Rubber Co., same place.

ISSUED SEPTEMBER 19, 1899.

- 633,142. Pneumatic Bicycle Saddle. Joseph J. Monahan, Chicago; Emma Monahan, administratrix of said Joseph J. Monahan.
- 633,152. Jacket for Printers' Rollers. Edward L. Perry, Paterson, N. J.
- 633,343. Nipple. John A. Heany, Philadelphia, assignor of two-thirds to William W. R. Hanley and Guy W. Hanley, same place.
- 633,373. Pneumatic Tires. Francisco Toni, London, England.
- 633,444. Rubber Tire for Vehicles. Arthur E. Friswell, Providence, R. I.
- 633,539. Rubber Tire for Vehicles. Charles H. Wheeler, Akron, Ohio.
- 633,540. Rubber Step for Vehicles. Charles H. Wheeler, Akron, and Frank W. Kremer, Wadsworth, Ohio; said Kremer assignor to said Wheeler.
- 633,541. Apparatus for Setting Rubber Tires. Charles H. Wheeler, Akron, and Frank W. Kremer, Wadsworth, Ohio; said Kremer assignor to said Wheeler.

ISSUED SEPTEMBER 26, 1899.

- 633,557. Nozzle for Syringes. Charles L. Akers, Louisville, Ky.
- 633,638. Composition of Matter for Closing Punctures in Pneumatic Tires. Charles F. Burr and John S. Hendrickson, San Fernando, Calif.
- 633,652. Tire for Vehicle Wheels. Frank Latimer, Huntley, Ill.
- 633,679. Pneumatic Tire. Edgar M. Birdsall, Buffalo, N. Y., assignor to Mary B. Birdsall, same place, and H. S. Kellet, Auburn, N. Y.
- 633,680. Tire. Dudley H. Bradlee, Medford, Mass., assignor by direct and mesne assignments, to the New England Rubber Tire Wheel Co.
- 633,685. Tire. Andrew W. Conatser, Compton, Calif.
- 633,790. Hose Clamping Device. Albert M. Burgher, Clay City, Ky.
- 633,848. Pneumatic Tire. Axel A. Johnsson, Chicago, Ill.
- 633,961. Packing Compound. Charles L. Ireson, Boston, Mass.

THE ENGLISH PATENT RECORD.

APPLICATIONS FOR PATENTS.

- 15,163. James Edward Bedford, Charles Bedford, and Frank Reddaway, 27, Kirkstall road, Leeds. India-rubber substitute from linseed oil. July 24.
- 15,186. John Baragwanath King and Frederick Rouse Pool, 23, Southampton buildings, Chancery lane, London. Improvements in boot trees or lasts. July 24.
- 15,200. Hermann Bernert, 166, Fleet street, London. Mold for making rubber types. July 24.

- 15,255. Adolf Gentzsch, Birkbeck Bank chambers, Southampton buildings, Chancery lane, London. Manufacture of a Gutta-percha like substance. July 25.
- 15,257. Rudolf Wieduwilt, 22, Cannon street, London. Improvements in air valves for road vehicle tires.
- 15,263. Georg Ponitz, 77, Colmore row, Birmingham. Gumming stamp. July 25.
- 15,272. Herbert John Haddan, 18, Buckingham street, Strand, London. Improvements in devices for setting or fixing rubber tires to vehicle wheels. [Frederick Stewart, U. S. A.] July 25.
- 15,274-15,275. Herbert John Haddan, 18, Buckingham street, Strand, London. Improvements relating to tires for vehicles. [Frederick Stewart, U. S. A.] July 25.
- 15,284. Uzziel Putnam Smith and Thomas Kane, 45, Southampton buildings, Chancery lane, London. Improvements in puncture closing tubes for pneumatic tires and process of manufacturing the same. July 25.
- 15,298. James Melling, 4, South street, Finsbury, London. Portable bath shampooer.
- 15,303. George Harry Gascoigne, 11, Burlington chambers, New street, Birmingham. An improved resilient tire or circumference for cycle and like wheels. July 25.
- 15,332. Stuart Bunting, 41, Litchfield road, Aston, Birmingham. Improvements in and relating to pneumatic tires for cycles and other vehicles. July 26.
- 15,351. Algernon Fieldsend Weller Velere and Frederick Charles Colgrove, 35, Highbury Crescent West, London. Improvement in pneumatic tires. July 26.
- 15,353. Frank Wilbur Kinney, 45, Southampton buildings, Chancery lane, London. Improvements in elastic tires for the wheels of vehicles. [Date applied for under Act 1883, section 103, January 16, 1899, being date of application in United States.] July 26.
- 15,430. Uzziel Putnam Smith, 45, Southampton buildings, Chancery lane, London. Improved means for attaching pneumatic tires. July 27.
- 15,462. August Severin, 61, Chancery lane, London. Improvements in tires for velocipedes and like vehicles. July 27.
- 15,535. William Douglas McNeil, 191, Fleet street, London. Improved method of constructing and mounting tires for bicycles and other vehicles. July 28.
- 15,588. Maurice Womersley Smith, 37, Chancery lane, London. Improvements in pneumatic tires. July 29.
- 15,648. Herman Salomon Van der Stempel, 11, Southampton buildings, Chancery lane, London. Improved means for repairing pneumatic tires. July 31.
- 15,927. John Whitehead, 5, Albert street, Birmingham. Improvements in tires for cycles and other vehicles. August 4.
- 15,943. George Dunlop Smith, 121, West George street, Glasgow. Improvements in pneumatic tires. August 4.
- 16,021. William Henry Brice, 14, Cannon street, London. Improved method of rendering impervious to water rain cloaks, overcoats, and other garments. August 5.
- 16,242. Frederick Noel Mackay, 45, Southampton buildings, Chancery lane, London. Improvements in and relating to resilient tires for wheels. August 9.
- 16,109. Simon Pierre Francois Lehmkuhl, Zurich, Zeltweg 15. Improvements in pneumatic tires. August 8.
- 16,118. Sidney Clark Grice, 21, Jeffery's road, Clapham, London. Puncture locator for air tubes of pneumatic tires. August 8.
- 16,125. Frederick William Golby, 36, Chancery lane, London. Improvements in elastic tires for cycles and other vehicles. [John Junk, Germany.] August 8.
- 16,129. Guy F. Laws, James N. Randle, and Sanford H. Houser, 52, Chancery lane, London. Improvements in puncture proof pneumatic tires for bicycles and other vehicles. August 9.
- 16,310. Frank Alban Byrne and George Boardman, 11, Burlington chambers, New street, Birmingham. Improved manufacture of India-rubber fabric or fabric composed of yarn, cord, thread, string,

- or such like and India-rubber and apparatus for use in connection therewith. August 10.
- 16,334. Alfred Daniel Vidler, Heathholme, Furze Platt, Maidenhead. Pneumatic boot and shoe and glove trees. August 11.
- 16,359. Stuart Bunting, 41, Litchfield road, Aston, Birmingham. Improvements in and relating to pneumatic tires for cycles and other vehicles. August 11.
- 16,386. George Gatton Melhuish Hardingham, Clun House, Surrey street, London. Improved method of constructing tires for velocipedes and other vehicles. [William Douglas McNeill, Natal.] August 11.
- 16,396. William Edward Carmont, 166, Fleet street, London. Improvements connected with resilient tires for wheels of vehicles such as motor cars and the like. August 11.
- 16,412. Kate Wilton Cox and George Warner, 104, Colmore row, Birmingham. Improvements in and relating to pneumatic tires. August 12.
- 16,440. John Alexander Gamble, 6, Lord street, Liverpool. Improvements in or in connection with aprons or waterproof devices for the outside seats of tram cars and other vehicles. August 12.
- 16,447. Charles Farrer and George Hammond, 27, Brook street, Holborn, London. Pneumatic tire by a fresh made up attachment. August 12.
- 16,465. Simon Pierre Francois Lehmkuhl, Zeltweg 15, Zurich. Puncture locator for pneumatic tires. August 14.
- 16,507. Herbert Akroyd Stuart, 4, South street, Finsbury, London. Improvements in tires for wheels. August 14.
- 16,576. Harry Adrian Taylor Stoakes, 5, Hatton garden, London. Improvements in pneumatic handles for velocipedes, motor cars, or other similar purposes. August 15.
- 16,621. James Jelly and Henry Jelly, 111, Hatton garden, London. Improvements in or relating to pneumatic tires. August 16.
- 16,626. Martin Bengeman Grout and Thomas William Moore, 31, Southampton buildings, Chancery lane, London. Improvements in composition of matter for repairing rubber tires. August 16.
- 16,639. John Adair, Waterford, Ireland. Improvements in pneumatic tires for wheels. August 16.
- 16,656. Eleazer Kempshall, 45, Southampton buildings, Chancery lane, London. Improvements in elastic tires for vehicles. August 16.
- 16,661. James Leslie Wright, 18, Southampton buildings, Chancery lane, London. Improvements in the manufacture of cased tubes. August 17.
- 16,704. Arthur Myddleton Keeves, 19, Holborn viaduct, London. Device for use in joining the inner tubes of pneumatic tires. August 17.
- 16,720. Charles Stapleton, No. 13 Park row, New York. Improvements in retaining devices for rubber tires and in machines for applying rubber tires to vehicle wheels. August 17.
- 16,755. Harry Perrins, 18, Southampton buildings, Chancery lane, London. Improvements in the manufacture of tubes. August 17.
- 16,777. R. W. Savage, 91, High street, Putney, London. Right and left hose. August 18.
- 16,799. Eugene Ferdinand Forsman, 70, Palace chambers, Westminster, London. Improved tool for gumming. August 18.
- 16,805. Richard Russell Gubbins and Herman Logg, 166, Fleet street, London. Means for the recovery of rubber from waterproof cloth or cuttings thereof. August 18.
- 16,937. James Yate Johnson, 47, Lincoln's Inn Fields, London. Improvement in the manufacture of coloring matters. [Badische Anilin und Soda Fabrik, Germany.] August 20.
- 16,971. John Shaw, George Dixon, and John Grantham, 28, Rosehill terrace, Willington-on-Tyne. Improvements in valves and puncture locators for pneumatic tires. August 22.
- 17,007. James Jelly and Henry Jelly, 111, Hatton garden, London. Improvements in or relating to pneumatic tires. August 22.
- 17,026. Samuel Henry Crocker, 37, Chancery lane, London. Improved rim and tire for wheels. August 22.
- 17,037. Uzziel Putnam Smith, 45, Southampton buildings, Chancery lane, London. Improvements in or relating to pneumatic and like detachable tires. August 22.
- 17,074. Thomas Helyear, 54, West street, Bridport. Improvements in bicycles and tricycles.
- 17,163. Herbert Fox Standing, 33, Chancery lane, London. Improvements in pneumatic tires. August 24.
- 17,227. Thomas Wright, 158, Edmund street, Birmingham. Improvements in wheels tires. August 25.
- 17,242. James Vurau Ingram, Poole, Dorset. Improved gumming appliance for gumming receipt forms and the like. August 25.

PATENTS GRANTED.—APPLICATIONS OF 1899.

8330. Pneumatic tire made of a series of pneumatic rings. Hill, C. A., Hull, Yorkshire.
8365. Anti puncture pneumatic tire. Edmunds, W., Middlesex, and Cresswell, W. H., Woodley Tire Co., Woodley, Cheshire.
8633. Solid woven tire. Zucker, J., Strakonitz, Bohemia.
8648. Jacket for pneumatic tires. Reepmaker, J., Rotterdam.
8797. Rubber eraser. Rafford J. K., and Nathan, A. J., London.
8836. Double tube tire. Gubbins, R. R., and Cotton, R., London.
8879. Pneumatic horse collars. Fry, J. and Barnes, J. W., Liverpool.
9297. Self-healing tire. Hubbard, J., Upper Holloway, N.
9501. Joint making packing. Turner, J. E., Bootle, Lancashire.
9630. Spring Tire. Brendel, M., New York, U. S. A.
9650. Water bag. Heussy, E., Manchester.
9711. Pneumatic tires with separable treads. Pullbrook, A., West Kensington, Middlesex.
9848. Double tube tire. Hiller, K. G., Zittau, Saxony.
- 10,099. Non-puncturable tire. Junkins, L. D., Somerville, Mass.
- 10,272. Pneumatic tire fastening. Jackson, J. P., Liverpool.

SELLING RUBBER GOODS IN MONTANA.

MR. T. E. MURRAY, a salesman for the St. Paul branch of the Goodyear Rubber Co., who travels in Montana, was a recent visitor to New York. He reports a general condition of prosperity in that far off field. There is a steady growth of population, together with a spirit of energy, independence, and hopefulness among the people which promises much for the future. The chief staples of Montana are all selling at top prices, and the producers are profiting at a rate which adds largely to their buying power. Wool has advanced, within two years, from 6 or 7 cents to 19 and 20 cents a pound. The shipment this year from the single town of Great Falls amounted to 6,000,000 pounds. Copper has doubled in price within a year. The third item of export is livestock, the profits on which have been enhanced by the recent advance in beef. Everywhere in the state there is a demand for rubber goods. One of Mr. Martin's customers lives at a point 138 miles from the nearest railway station, and is reached by stage coach, the trip being made in 22 hours, at a cost of \$50 both ways. On his last visit to this place he sold a bill of \$4000 worth of rubber boots and shoes and coats. All business was suspended at this place on July 4 and 5, a brass band was secured from a distant point at a cost of \$700, and the citizens gave themselves up to patriotic demonstrations. The farmers and wool growers convey their produce to market in wagons drawn by from eight to twenty horses. Mr. Murray has many interesting stories to relate of how the trade is reached in remote districts, but is a firm believer in the progress which soon will place his customers in closer touch with the rest of the world.

THERE are 600 golf clubs in the eastern United States, according to Charles S. Cox, in charge of the golf business of A. G. Spalding & Brothers (New York), averaging 600 members, and giving a total of 60,000 members. The average golf player, he says, uses six dozen balls a season, or a total of 360,000 dozen balls, which represents in money about \$1,500,000.

CAN THE PACIFIC CABLE BE MANUFACTURED IN AMERICA?

THE use of India-rubber for insulating deep sea submarine cables has been held in the background—due partly to English conservatism—and, as has been often hinted, by the control of the limited output of Gutta percha by certain large English companies. Many attempts have been made in Great Britain by various cable manufacturers to use India-rubber, but it has been discouraged by the larger Gutta-percha interests. The only notable exception has been in the case of Hooper's Telegraph and India-Rubber Works, Limited, who for many years have made strenuous efforts to prove to the public the advantages of India-rubber. Their great opportunity came upon the failure of Gutta-percha to withstand the heat of transportation in tropical climates. The Indian government first used their rubber insulations for river crossings, and finally, when its merits had been proven, the India-Ceylon cable was laid. The success of this led to the building of many other short lines insulated with rubber, among the most notable of which were the Persian Gulf cable, the Chinese government cables, the China-Japanese cable, and the Cuban and Brazilian cables.

One reason for the early failures, before the success of Hooper in using rubber insulation, was the attempt to compound rubber, using substitutes with it for cheapness, rather than pure vulcanized rubber. Their methods of applying were crude, and their modes of cleaning and vulcanizing not done with the proper amount of care, the electrical inspection and mechanical tests not being made with the degree of accuracy that is absolutely necessary for deep sea work. Hooper, with all his success, left much to be desired in a perfect core. Gutta-percha must be handled with great care and accuracy—it is ground, boiled, washed, sheeted, and strained before it is ready to put on wire—while India-rubber comes in a much purer form, with the present American machinery it can be washed absolutely clean, with far less trouble than Gutta-percha.

One of the principal objections to India-rubber insulation made by the English cable expert, Mr. Charles Bright, and also by Captain H. D. Wilkinson, is the weakness in putting the rubber on in strips, thus having one or two continuous seams throughout the whole length of the cable. They state that if it were possible to put it on with a "solid homogeneous and seamless covering," it would be, "with its many advantages, superior to Gutta Percha."

At this point it seems possible to state that such a seamless covering can be put on with India-rubber, and that two deep sea cables have been made in America and successfully laid, giving absolutely perfect results.

The first cable was constructed under an emergency order two years ago. When it was seen that war was inevitable between Spain and United States, General A. W. Greely, Chief of the United States signal service, with a wonderful foresight, saw that the necessary campaign could be greatly aided by telegraphic connections with a base of supplies. This would require, among other things, a submarine cable connection, with the necessary cable ship and expedition. General Greely with his usual faith in American institutions, decided that the cable must be built in the United States. Colonel James Allen was detailed to consult with Mr. Ira W. Henry, electrician of The Safety Insulated Wire and Cable Co., on a type of cable suitable for such purposes. It being impracticable, from lack of time and for other reasons, to fit out a ship with delicate ap-

paratus and tanks necessary for handling Gutta-percha, it was decided to use India-rubber insulation. After due consideration as to the depth in which the cable was to be laid, with the resultant water pressure and tensile strength necessary for the armor, an emergency order was given (due to war necessity) to The Safety Insulated Wire and Cable Co. of New York. This company, with its large plant and years of experience in making many miles of cables for river crossings and harbor defence work, was beyond doubt in a better condition than any other for handling such a contract. Apparatus was at once constructed for making searching tests on the cable under all the conditions that would be met in the waters it would be laid in.

This first American cable was constructed in a remarkably short time, being laid by Colonel James Allen, and put in working order in Cuban waters one day before Shafter's army arrived at Siboney. Over this cable all the messages of the war were sent, and President McKinley, at Washington, could send and receive despatches from the trenches in front of Santiago inside of fifteen minutes. The success of this cable led General Greely to advertise for a similar type to connect the different islands of the Philippine group, the Safety company being the successful bidder.

Without going into needless details of the manufacture, it is sufficient to say that in both these cables the copper conductor was first covered with a seamless coat of pure Pará rubber, over which a heavy vulcanized coat was laid, also put on seamless. This perfected seamless process spoken of is the result of many years of work of Mr. Leonard F. Requa, general manager of the Safety company. The rubber is not dissolved or softened and "spewed" on, as has been erroneously reported, but is forced around the wire from a specially designed machine at a pressure of twenty tons to the square inch. A detail showing the perfection of this process is that the grain of the rubber is absolutely preserved and is laid around the copper conductor spirally.

The two points so anxiously sought for by the English cable experts—homogeneous and seamless—are thus reached in this insulation, and its superiority to a seam process can be compared when it is considered that the strips of rubber running through the insulating machines are put together by the pressure of a cutting-wheel adjusted by a hand-screw, at a pressure not exceeding fifty pounds.

The most important question at the present time to wire manufacturers is the construction of the Pacific cable. The bill introduced in the United States congress during the last session called for a cable of American manufacture. The points were at once raised—whether there is a plant in the United States capable of undertaking so large a contract, and if American engineers could build and lay such a cable with home talent. According to the officials of the company named above, these questions can be readily answered as follows:

First: The cable can be built in America.

Second: As to types of insulation, either Gutta-percha or India rubber cables can be made here, but taking in consideration the ease and certainty of which India-rubber can be procured and the points in its favor before mentioned, it seems that rubber would have first choice.

Third: Can the cable be laid by American talent in American ships? With the experience already gained by the officers and men of the United States army signal corps, on two

cable expeditions, this work can readily be done by them. At the present time, it is true, there is no plant in this country large enough to turn out 500 miles of deep sea cable per month, but inside of ninety days after the order had been placed, this output could begin.

Since the sailing of the United States cable ship *Hooker*, on May 1 last, with a cable for the Philippine Islands, the Safety company have shipped over 100 additional miles of a lighter type of cable, insulated in the same manner.

On account of the many large orders now on their books, The Safety Insulated Wire and Cable Co. have found it necessary to move to a site where cables can be loaded directly on boats, and where additional room, which is not obtainable in the city, can be had. Their present factory, which occupies ten buildings in New York city, is not large enough for their growing orders, among which might be mentioned, at present on the books, rubber insulated cables for the Metropolitan Street Railway Co., and also for the Third Avenue Railroad Co., which will amount to over \$1,000,000. In their new site, which will have every modern improvement in machinery and handling facilities in buildings built entirely of brick and slate and one story in height, it will be possible for them, with a slight increase in their machinery, to construct the Pacific cable.

Such a plant would make the United States independent of foreign manufacturers, any time during war or peace, that cables of this character should be needed, especially now with our increased outlying possessions.

ANOTHER RUBBER PLANTING COMPANY.

THE La Zacualpa Rubber Plantation Co. have been incorporated under the laws of California to operate the La Zacualpa plantation, in the department of Soconusco, state of Chiapas, Mexico. They have purchased 18,000 acres of land, of which 12,000 are stated to be suited for rubber cultivation. It is reported that there are now on the land 25,000 rubber trees five years of age and over; 50,000 trees from one to four years old; 30,000 trees planted this year; and 300,000 young trees in the nurseries, to be planted next year. They offer to sell shares on installments. The officers are: J. W. Butler, president and managing director; Louis L. Jones, vice president; E. Noël, secretary—with offices in Nos. 703-704 Claus Spreckels building, San Francisco—and O. H. Harrison, resident director, Tapachula, Mexico. The manager of the plantation is Enrique Ampudia Chavero, C. E., who has long been familiar with Mexican agriculture. The company issue from time to time *The Rubber Planters' Bulletin*.

THE BANIGAN EXHIBIT AT PHILADELPHIA.

A RUBBER shoe exhibit worth seeing is that of the Joseph Banigan Rubber Co. at the National Export Exposition, at Philadelphia. It is in charge of C. M. Linthicum, son of C. W. Linthicum, president of the Linthicum Rubber Co. (Baltimore, Md.), who have charge of the "Banigan" sales in southern Pennsylvania, southern New Jersey, Delaware, Maryland, District of Columbia, the Virginias, Kentucky, and the South. The exhibit is located at section P-24. There is a lofty cabinet for rubber shoes alone, on the shelves, the lower drawers being filled with heavy boots. An outer display case is also filled with boots. All of these are likewise shown split all the way from heel to knee, revealing the entire composition and construction of each article. On top of this case is a large rubber "ham," so called from its conformation. It is of pure Pará rubber, just in from Brazil, and attracts much attention.

THE ANTWERP RUBBER MARKET.

TO THE EDITOR OF THE INDIA RUBBER WORLD: At yesterday's public sales 303 tons were exposed, including 280 tons of Congo sorts. The Congo rubber was all sold, and 13 tons of the sundry sorts. The sales passed off briskly, at an average advance of 3 per cent. on the brokers' estimation, based on the previous sales (August 31)—equivalent to 25 to 35 centimes per kilogram. The United States must have participated in these purchases, as the Lopori, Mongalla, and Equateur grades, generally taken for this destination, mostly shared in the advance. The sales since September have amounted to 317. Our actual stocks are 87 tons of sundry sorts, and 250 tons Congo sorts just landed by the steamer *Leopoldville*, making in all 337 tons. These arrivals will be offered for sale toward the end of October, probably together with 205 tons expected shortly by the steamer *Bruxellesville*, from the Congo. Details of the latter are as follows:

	Kilograms.
Société A. B. I. R.	18,000
Société Anversoise, pour le Commerce au Congo.	63,000
Comptoir Commercial Congolais.	14,000
Plantations Lacourt (Bunge & Co.).	5,000
Bunge & Co.	96,000
Société Coloniale Anversoise.	9,000
Total	305,000

Antwerp, September 27, 1899.

C. SCHMID & CO.

ANTWERP RUBBER STATISTICS FOR SEPTEMBER.

DETAILS.	1899.	1898.	1897.	1896.	1895.
Stocks, August 31 kilos	400,432	144,526	157,278	57,300	82,465
Arrivals in September. .	232,517	192,531	251,315	137,648	42,364
Aggregating.	632,949	337,057	408,593	194,948	124,829
Sales in September. . . .	325,467	110,183	151,244	139,790	44,551
Stocks, September 30	307,482	226,874	257,349	55,156	80,278
Arrivals since January 1	2,628,387	1,415,479	1,315,785	639,762	341,619
Sales since January 1. . .	2,584,245	1,283,068	1,198,064	673,458	300,773

COST OF RUBBER CARRIAGE IN AFRICA.

IN a recent report on the trade of the Gold Coast Colony, Acting Governor Low says that rubber is one of the chief sources of wealth, and that, with improved means of transportation, the output could be trebled. The whole production is now conveyed to the coast on the heads of carriers—some of it from points far in the interior. He writes that "the cost of each carrier from Kumasi to Cape Coast is at the minimum 10s., and that it takes 1400 carriers to bring down 70,000 pounds of rubber, bringing the total cost to £700 for transport alone for an eight days' journey." This makes the cost per pound 5 cents, or \$100 per ton.

THE PROPOSED PACIFIC CABLE.

A PRESS despatch from Montreal says: "Lord Strathcona and the Earl of Aberdeen have been appointed Canadian members of the board of control of the new Pacific cable. Australia has three members and Great Britain three. The board will now proceed to invite tenders and make financial and other arrangements for the completion of the project. It is expected that the selection of Lord Aberdeen will enlist the sympathies of the Liberal opposition in Great Britain, in which party he has resumed his former active membership."

At the Colombo Agri Horticultural Exhibition, at Ceylon, in July, the prize for the best commercial sample of India-rubber produced by cultivation was awarded to Lady de Soysa.

RUBBER GOODS EXPORTS FROM NEW YORK.

EXPORTS from this port, during the four weeks ended September 26, 1899, classed as "India-rubber goods," amounted in value and were consigned as follows:

Great Britain.....	\$19,677	Ecuador.....	\$ 122
France.....	17,275	Colombia.....	225
Germany.....	6,209	Peru.....	352
Belgium.....	121	Venezuela.....	314
Holland.....	65	Uruguay.....	107
Italy.....	2,631	Australia.....	5,201
Denmark.....	1,251	New Zealand.....	3,195
Norway and Sweden.....	73	British Africa.....	2,280
Spain.....	362	Other Africa.....	6 0
Switzerland.....	726	British East Indies.....	130
Canary Islands.....	39		
Mexico.....	1,105	Total, Aug. 30-Sep. 26.....	\$64,558
Central America.....	834	Total, August 2-29.....	74,056
Cuba.....	889	Total, June 28-Aug. 1.....	82,302
Porto Rico.....	103	[Five Weeks.]	
Haiti.....	13	Total, May 31-June 27.....	81,804
British West Indies.....	33	Total, Apr 26-May 30.....	78,498
Danish West Indies.....	12	[Five Weeks.]	
Dutch West Indies.....	34	Total, Mar 29-Apr 25.....	75,288
Brazil.....	305	Total, March 1-28.....	60,073
Argentina.....	242	Total, February 1-28.....	42,902

The value of such goods exported from New York amounts usually to about 60 per cent. of the total for the United States. These statistics do not include any rubber goods that may have been embraced in exports classed as electrical material, dental material, bicycle material, and the like, or tires shipped on bicycles. There were exported during the same period of four weeks dress shields valued at \$12,572, as follows: London, \$244; Antwerp, \$3388; Southampton, \$7041; Liverpool, \$429; Hamburg, \$1470. Crude rubber was exported to the value of \$19,376. "India-rubber scrap" was exported as follows: Bordeaux, \$361; Glasgow, \$4255; Havre, \$1719; Lisbon, \$300; Manchester, \$1650; Berlin, \$2500; total, \$10,785.

TOTAL EXPORTS FROM THE UNITED STATES.

THE total exports of goods classed as manufactures of India-rubber and Gutta-percha from the United States, during the months of July and August, 1899, under the new classification adopted July 1, were of the following values:

Belting, hose, and packing.....	\$101,604
Boots and shoes.....	65,958
All other.....	202,182

Total.....	\$369,744
Total July and August, 1899.....	260,843

The total exports for the eight months ending August 31, for three years past, have been as follows:

1897.	1898.	1899.
\$1,134,714	\$1,086,438	\$1,304,498

The number of pairs of rubber boots and shoes exported increased from 167,010 in the first eight months of 1897 to 330,120 in the same period of 1899.

A WARNING TO EXPORTERS.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Here is a hint possibly useful to other concerns in our trade. Some time since we received an order from Bucharest, in Rumania. On inquiry we were informed in due course by one of the trade agencies (who presumably obtained their information from a foreign mercantile agency) that the proposed buyer was good for the amount. We therefore shipped the goods, but instead of payment we received a claim amounting to one-third of their value, and on endeavoring to sue, were advised by the foreign lawyers to allow the claim and settle. We were further informed that our experience was the usual result of

giving credit in southeastern European countries. Hence, we were told, no German or Russian factories ever shipped goods to those countries otherwise than with demand draft attached to bill of lading, first having secured a certain percentage of cash to accompany the order.

RUBBER.

New York, September 28, 1899.

APROPOS OF SUBSTITUTES.

UNDER the title "A Rubber Substitute" has appeared a tastefully executed pamphlet of eight pages, bound in crimson and black and printed in the same colors, and exploiting the substitute offered by The Manufactured Rubber Co. (Philadelphia.) Only one page in the book, however, contains anything that will interest the rubber manufacturer, the rest being matter that appeals wholly to the layman. For example, the pamphlet says "Take a pound of crude rubber and a pound of our substitute—presto!—you have two pounds of material with which to fulfil your rubber wants." The rubber manufacturer, however, is likely to say "Take a pound of rubber and a pound of barytes—presto!—you have two pounds of material with which to fulfil your rubber wants, and at much less cost, and for many uses a better compound than any oxidized oil product can give." In other words the virtue is not in the substitute or in the barytes, but in the rubber. This criticism is not made with the idea of suggesting that the substitute under discussion is worthless, but merely to point out that the illustration given is one that trades on the ignorance of the general public and therefore makes the whole scheme open to suspicion on the part of those who are at all familiar with rubber compounding.

OVENDEN'S ELECTRIC ALARM SYSTEM.

A VERY simple and valuable apparatus in which two rubber men in Akron, Ohio, are largely interested, is the fire alarm patented by Mr. Ovenden of that city. It dispenses with all clock movements, weights, pulleys, springs, and other delicate or cumbersome machinery likely to get out of order, thus enabling the manufacturer to construct it without any special and costly plant, thereby reducing the cost considerably less than any other fire alarm box on the market. It can also be used as watchman's tell tale or police box. It is hand or automatic, and successive—that is, if more than one box should be operated at the same time each box will give its own signal successively without confusion at the fire station. It is simple in operation, and cannot be interfered with after once started. The mechanism consists of a circular elevator, a roller contact former, and a series of inclined rails. The roller passes over the inclined rails, and at certain points forms contact, completing a circuit, and giving a signal at each contact in the fire station. These contact points are systematically arranged along each rail to indicate signal required, after which the roller contact former assumes its normal position in the receptacle of elevator below, immediately ready for use again.

MR. JAMES SUYDAM, St. Paul manager for the Goodyear Rubber Co., saw the demonstration in honor of Admiral Dewey in New York, this being the first time in four years that he had left his business long enough to come so far east. His connection with the firm began March 1, 1865, at No. 347 Broadway, New York. He went to Chicago for the Goodyear company in 1868; was manager at Milwaukee 1875-1885; and has since had charge of the business at St. Paul. Recently the Minneapolis branch was consolidated with that at St. Paul.

NEWS OF THE RUBBER TRADE.

TO MAKE RUBBER SHOES IN ST. LOUIS.

THE Monarch Rubber Co. (St. Louis) have decided to increase their capital from \$75,000 to \$200,000, fully paid. They have purchased three acres of a ground on which to erect a rubber shoe factory, and ground has been broken for the main building, to be 226×150 feet, including a court 50×125 feet. The engine and boiler rooms, machine shop, and electric light plant will occupy buildings not included in the above, but adjoining it. The idea is to start with a daily capacity of 10,000 pairs. The factory will be erected expressly to supply the trade of the Monarch Rubber Co., and the product will be sold directly to the retail trade. The company are also erecting a new fireproof seven story building as a store to accommodate their rubber shoe trade.

H. E. Wagoner, president of the company, started as a salesman in the southwest for the Goodyear Rubber Co.'s St. Louis house, after which he became manager of the rubber department of the Desnoyers Shoe Co., in that city. Later he bought out that department and organized the Monarch Rubber Co., which was incorporated in 1895 with \$40,000 capital. When the capital was increased to \$75,000, in 1898, William P. Hazard joined the company, as vice-president. He will have charge of the office at the rubber shoe factory. E. H. Gorse, treasurer of the company, was in the dry-goods trade until 1896. W. E. Hemenover, secretary of the company, and who will be the superintendent of the factory, started with the Goodyear Rubber Co. in New York at the age of sixteen, remaining with them twelve years. He was next manager of an agency of the United States Rubber Co. in Chicago. It is expected that the new factory will be in operation by February 1.

The Monarch Rubber Co. write to THE INDIA RUBBER WORLD in relation to their new enterprise:

"Hitherto the manufacture of rubber footwear has been confined to the East; there are many reasons for this, but from no point of view can it be argued that rubber shoes cannot be made in the West. The essential questions of location of plant, climate, raw material, labor, cost of manufacture, transportation facilities, distribution of product, etc., have had our careful consideration and we do not feel that we are experimenting. St. Louis has grown very materially within the past few years as a distributing point for rubber shoes, and in leather footwear it is known as the largest market outside of Boston. The manufacture of rubber shoes in St. Louis is an interesting point to the Western consumer and we have already been assured of a very large patronage in our brands, prices and quality being equal. It is not our intention to antagonize any other interests. We purpose to manufacture the highest grades of goods consistent with the demand and which will command the highest prices irrespective of other manufacturers.

"During the several years which we have been in business it has been our constant endeavor to fill our orders promptly and completely. We have not at all times been able to do this, as factories have not been able to supply our wants in quantities and styles needed. This situation has been a handicap to us, as our business has increased very materially and on this account we have been laying plans for some time for the manufacture of our own goods in St. Louis."

THE LATEST FROM COLLINSVILLE.

REFERRING to the project for a rubber shoe factory at Collinsville, Conn., which failed to be carried out as expected [see

page 43 of this paper] the Hartford Times published a letter stating that the offer of citizens of Collinsville to donate land, water power, and buildings to secure the location of a rubber factory was more than the people there could carry out. The writer asserts that if this offer had been made good, the company would have fulfilled its agreement to build a factory. The Times also republishes an article from THE INDIA RUBBER WORLD of September 1, on "The New Shoe Factory at Concord Junction," to indicate that, had the Collinsville people been more enterprising, they might now have had a factory building under way. The writer seems to think that it is not yet too late to revive the Collinsville project. A picture is printed showing designs of the building at one time proposed for Collinsville.

NEW RUBBER FACTORY IN CANADA.

THE Berlin Rubber Manufacturing Co., Limited, have been organized with the election of J. Kaufman, president; A. L. Breithaupt, secretary and treasurer; and George Schlee, manager. They have erected a factory plant at Berlin, Ontario, embracing a three story brick building 145×53 feet and a boiler house 48×50 feet, together with coal sheds and the like. There have been installed two boilers of 130 horse power each and an engine of 230 horse power. The rubber machinery has been imported from the United States.

RUBBER GOODS FOR THE ARMY.

PROPOSALS for supplying 75,000 rubber ponchos for the United States army were opened on October 5 at the quartermaster's depots at Philadelphia and elsewhere. Contracts have been awarded as follows: C. A. Bloomingdale, Brooklyn, 46,000, in four lots, at \$1.37½ to \$1.40; F. E. McCarthy, New York, 20,000, in two lots, at \$1.41 and \$1.44; Allen C. Brewington, Brooklyn, 9,000 at \$1.43. The highest bid received was from a rubber manufacturer, for the whole 75,000 at \$2.02 each. John Wanamaker bid \$1.81. No bids were received at the Boston office and only one at Cincinnati.

INLAID RUBBER TILING.

CHARLES D. CUGLE, representing The B. F. Goodrich Co (Akron, Ohio) in Baltimore and vicinity, has received the contract for some 4200 feet of the Goodrich inlaid rubber tiling, for use on the steamer *Chester W. Chapin* now building at the Maryland Steel Co.'s marine department, for the New York and New Haven Transportation Co. The contract is to cover eleven rooms, and four stairways, aggregating the above amount in square feet. The Goodrich Tiling differs somewhat from the general run of rubber tiling, inasmuch as it is made in sheets and is so constructed that it goes together perfectly, covering room comparatively in one solid sheet, which weight would keep in place, to say nothing of the extra precaution of cementing it solidly to the floor.

SEAMLESS RUBBER CO. STILL EXPANDING.

THE Seamless Rubber Co. (New Haven, Conn.), although they have just completed an extensive addition to their buildings, have purchased a tract adjoining their premises upon which will be erected soon a four story building 100×40 feet, to accommodate their offices and afford additional storage room. The company will now have an outlet in Congress avenue, instead of having to depend entirely on their general entrance, No. 55 Doggett street. They have between 300 and 400 hands at work, making rubber bands, tobacco pouches, nipples, gloves, hot water bottles, syringes, etc.

AMERICAN CHICLE CO.

THE directors on October 11 declared the first quarterly dividend of 1½ per cent. on the preferred stock and 1¼ per cent. on the common, payable October 16. The capitalization is \$3,000,000 in preferred and \$6,000,000 in common shares, but no statement has appeared as to whether the whole amount has been issued. The company was incorporated June 2, 1899, particulars appearing in THE INDIA RUBBER WORLD of July 1.

THE MANUFACTURED RUBBER CO.

THIS company, incorporated May 11 to make a new rubber substitute, has begun work in a plant at Cooper's Point, Camden, N. J., where a building 120x600 feet has been secured. Their superintendent, F. D. Mullan, has devised, for use in preparing the new material, a "kettle," in the form of a long cylinder, placed horizontally, waterjacketed, and provided with stirrers operated by machinery. Two of these kettles have been put in position, having a daily capacity 1000 pounds of finished product per day. It is stated that \$200,000 have been paid in on account of preferred stock, out of an authorized issue of \$1,000,000; the common stock was issued to the owners of the patents.

NEW SOUTH WALES.

A LETTER to THE INDIA RUBBER WORLD from the rubber firm of Perdriau & Co., Sydney, N. S. W., says: "With reference to your remarks in *re* dissolution of partnership, the Sydney business will be carried on by Mr. Henry Perdriau, the original founder of the business, under the old style and at the same address as heretofore." The change referred to was an arrangement by which the Melbourne business is now carried on by Perdriau Brothers.

A NEW RUBBER FACTORY IN AUSTRALIA.

B. GLASS & SON (Melbourne) have established and are operating a rubber factory in the near by town of Kensington, according to a correspondent of *The Cycle Age*, at an investment of nearly \$50,000. The firm have long been engaged in the manufacture of mackintoshes from imported materials. It is said that they will pay special attention to tires, and that contracts have been made with the Victoria railway and postal departments for supplying such rubber goods as may be required in the public service.

ENGLISH TIRE TRADE IN MELBOURNE.

THE India-Rubber, Gutta Percha, and Telegraph Works Co. have divided their business at Melbourne, Australia, to the extent of making a separate department for tires, under the name of the Wallace Pneumatic Tire Co. This will be under the management of J. R. Wallace, who has conducted the tire business of the firm in the past. The tire marketed in Melbourne hitherto as the "Silver town" will now be known as the "Wallace Triplex." The Palmer tire is also handled.

A BUSY SOUTHERN RUBBER HOUSE.

THE trade of Towner & Co. (Memphis, Tenn.), the only strictly rubber house south of the Ohio river, is stated by them to have been perfectly satisfactory in every respect, being considerably ahead of last year. They have favored THE INDIA RUBBER WORLD with a photograph of their store—No. 240 Main street and Nos. 32-36 Jefferson street—showing particularly the Jefferson street side of the store, where they do their shipping, which is very interesting as illustrating one of their "busy days." Messrs. Towner & Co. are agents for the Boston Belting Co.'s goods; also the Chicago Belting Co.'s leather belting and the Gandy Belting Co.'s cotton belting, and they handle the American Rubber Co.'s mackintoshes, and boots and shoes of the United States Rubber Co.—principally Can-dee, American, and Pará brands.

THE UNITED STATES RUBBER CALENDAR.

THE calendar for 1900 which the United States Rubber Co. will send out embraces the panels painted from designs made by Mr. John P. Lyons. One panel is filled by the picture of a little girl who says "I wish this snow would hurry." The artist has caught admirably the impatient child-like expression of the face, and the pose of the little one standing on the threshold when snow has just begun to fall. Another design is a child carrying her dog across a muddy street because "Jacky has no rubbers." A third panel has a "sudden summer shower" showing some kittens and the mother cat under an unexpected fall of water from an unkind hand. This calendar is a rich production in twelve colors, and it will be a beautiful table or desk ornament.

NEW INCORPORATIONS.

THE Nicaragua Rubber and Agricultural Co., under Delaware laws, September 26; capital \$20,000. Formed by a syndicate of Philadelphia capitalists to buy and lease plantations in Nicaragua and export products of that country.

=The Salem Rubber Cement and Shoe Finding Co. (Salem, Mass.), under Maine laws, to manufacture shoe materials; capital, \$10,000. President: Cornelius Driscoll; treasurer: J. H. Gannon—both of Salem.

=Barberton Rubber Works (Barberton, Ohio), October 12, under Ohio laws; capital, \$1000. Incorporators: I. C. Alden, E. L. Toy, W. Dunbar, G. C. Kohler, and J. W. Cary. These are the same incorporators as those of the Alden Rubber Co., recently formed with \$100,000 capital. The reason for forming the second corporation has not been learned.

TRADE NEWS NOTES.

THE International Vehicle and Automobile Tire Co., though actively engaged in developing their automobile tire interests, will not neglect the bicycle tire trade. They are in the field for orders for tires to be manufactured under the bicycle makers' own names.

=The Bowers Rubber Co. (San Francisco) have recently supplied the city of Minneapolis, Minn., with a good sized lot of fire hose. They have also sold hose to Omaha.

=W. D. Allen & Co. (Chicago) write to us: "Every indication points to an advance in the price of finished brass goods. Everything which enters into the construction of our goods is advancing in price, and we shall undoubtedly have to change our discounts soon. In fact, all prices are subject to change without notice."

=The B. F. Goodrich Co. (Akron, Ohio) have removed their Boston office to No. 24 Kingston street. Manager Warren states that the company will make a special effort in New England for 1900, on the "Palmer" and Goodrich "19" and "999" tires, though the other tires which the company manufacture under license will be supplied whenever wanted.

=The Connecticut Rubber Co.—John J. Ward, manager, No. 23 Church street, Hartford—report a large business for 1899. They wholesale and retail the product of leading manufacturers of rubber boots and shoes, clothing, tires, and sundries.

=The factory formerly operated by the Rand-Wayne Co. (Watertown, Mass.) has been closed, and it is probable that it will either be leased or sold for the manufacture of rubber goods. Mr. H. N. Wayne has withdrawn from the company, and erected a plant in Somerville, Mass., where he is doing a general line of mold work.

=The firm of J. H. Stedman & Co., handlers of high grade rubber scrap, have removed their Boston offices from No. 89 State street to No. 200 Summer street, where they are doing a largely increased business.

=The souvenir prepared by the Cable Rubber Co. (Boston) for distribution at this year's national carriage convention is a card case made of tan colored pig skin lined with kid. Inside of the case is a neat card, on which printed in script are a few words calling attention to the business of the Cable company. The only advertising suggestion about the case is the seal of the Cable company impressed upon the inner side of the case. This is so modestly done, and the seal is so artistic, that it adds to the beauty of the case rather than otherwise.

=The real estate and plant of the Hartford Rubber Works, according to the deeds transferring the property to the American Bicycle Co., are valued at \$224,000.

=The Para rubber exporting firm of La Rocque, da Costa & Co. have been succeeded by Frank da Costa & Co.

=William R. Thropp (Trenton, N. J.) is building up a good trade in building steam vulcanizers for rubber factories. He shipped recently to The Alden Rubber Co. (Barberton, Ohio) four vulcanizers—two 48 inches by 20 feet; one 36 inches by 6 feet; and one 30 inches by 52 feet.

=The Mechanical Rubber Co. (Chicago) are making a wide variety of rubber tiling, mats, and matting, including a line of tiling for use in public places in which a combination of colors is introduced with pleasing effect.

=The American Hard Rubber Co. have lately renovated their offices at Nos. 9 13 Mercer street, New York. By removing partitions they have admitted more light into the offices, while their general attractiveness has been enhanced by new floors of fine hard woods.

=The Goodyear Vulcanite Co. (New York) have erected a storeroom for dies, 30x60 feet, at their factory at Morrisville, Pa., which is an indication of a growth of their business.

=John O. Thorp is reported to have resigned his position as vice president of the Eastern Rubber Co. (Reading, Mass.), and become connected with the Boston Woven Hose and Rubber Co. in whose factory he will develop a line of druggists' sundries.

=L. S. Hoyt, proprietor of the Hoyt Rubber Co. (Boston), was reported lately to be ill from lead-poisoning, said to be contracted from handling litharge while compounding.

=William Hemminghouse, who travels in northern Minnesota for the Goodyear Rubber Co. (St. Paul), informs a representative of THE INDIA RUBBER WORLD that the demand for mechanical rubber goods in his district was never so large before, and that the tendency of consumers is to buy better grades.

=“Sulo,” the new substitute, is said to be meeting with remarkable success, due not alone to its merit, but to the active and intelligent work of its selling agent, George R. Meeker (New York).

=The Loewenthal Rubber Co. (Jersey City, N. J.) are evidently winning back many of their old customers, and their business, which was good from the start, is constantly increasing.

=Cotton duck seems to be scarce, the complaint coming from many mills that their orders for it are unfilled. Meanwhile, rumors of new duck mills are frequent.

=The three Stokes brothers, whose rubber interests are the largest in Trenton, N. J., are also heavy owners in some of the most profitable mining property that the Southwest affords.

=The DuBois cushion tire is finding a special field of usefulness on heavy trucks, a place which the ordinary solid tire has not yet satisfactorily filled.

=The Traun Rubber Co. (New York) are making a specialty of sponge rubber for rubber stamp work, and doing a good business in it.

=C. B. Tebbets, 2, (Lynn, Mass.) the pioneer manufacturer of cushion rubber heels, comes out frankly in a circular to the trade in which he says that he has decided to use a better quality of rubber in his “Star” rubber heels. He calls his new heel “The Best Genuine Virgin Rubber Heel.”

=Charles F. Parker, No. 41 Lincoln street, Boston, Mass., has on exhibition at his office an aluminum boot tree which was in constant use in rubber boot making for a number of years, and which is in every respect as good as it was when it was first made—a remarkable testimony to the value of the aluminum in place of the wood tree.

=E. Kempshall, the patentee of the Kempshall hose band, is working on a sponge rubber tire for automobiles.

=The Fisk Rubber Co. (Chicopee Falls, Mass.) are very busy on pneumatic tires. A special feature of their business of late has been the manufacture of automobile tires, and also of a new carriage tire, which is said to have exceptional merit.

=The Boston offices and warerooms of The Stoughton Rubber Co., since their recent remodelling, are among the most convenient and elegant of any in the trade.

=The Joseph Stokes Rubber Co. (Trenton, N. J.) have fitted up to manufacture rubber soling on a large scale, and have already placed a fine product on the market.

=The crude rubber importing firm of M. W. Hydes & Co., 28 Exchange street, E., Liverpool, have established a selling agency in New York, at No. 150 Nassau street. It will be in charge of Mr. Thomas Hydes. The Liverpool house, originally engaged in other lines, have been handling rubber for ten years, including all leading grades.

=Oliver R. Howe, proprietor of Howe's rubber store, Lynn, Mass., has removed from No. 50 Central square into the larger building next door, No. 52 Central square. During the ten years that this house has been in existence the business has grown constantly, this being the second removal that has been necessary. The goods carried include mackintoshes and rubber clothing, “Goodyear Glove” and “Gold Seal” boots and shoes, belting and engine supplies, and sundries.

=The Joseph Dixon Crucible Co. (Jersey City, N. J.) have an exhibit of their graphite productions at the National Export Exposition at Philadelphia—at the southern end of the main Exhibition hall, section M-7.

=Regarding the Roxbury Rubber Works Co., incorporated under Maine laws July 10, a letter to THE INDIA RUBBER WORLD from one of the incorporators, in Boston, says: “The company has been duly organized, but as I have withdrawn from the organization, having entered into the incorporation only for the purpose of perfecting the same, I am unable to give you any information in regard to the affairs of the company. My last information on the subject, however, was that no active steps had been taken towards doing business under the corporate form.”

=The Hood Rubber Co. (Boston) are now producing 19,350 pairs of rubbers daily. They have added lately to their plant a 1000 horse power Cooper-Corliss steam engine.

=The New Jersey Rubber Co. (Lambertville, N. J.) are erecting a three story building for storehouse and other purposes.

=Business at the Boston Rubber Shoe Co.'s factories is reported better than for several years past.

=Mr. E. H. Cutter, who is so well known as a former marketer of Woonsocket goods, has taken the selling agency of the Model Rubber Co. (Woonsocket, R. I.) It will be remembered that the active spirits in this company are former Woonsocket foremen and skilled employees, and Mr. Cutter's connection with them is therefore most appropriate. He will have his offices at No. 114 Bedford street, Boston.

=The Boston Belting Co. were successful bidders for fire hose in the recent awarding of contracts by the fire department of Spokane, Wash.

=The Birmingham Iron Foundry (Derby, Conn.), who were mentioned recently as having received a good order for rubber reclaiming plant, for the Russian-American India Rubber Co., have since received an order for similar equipment for the rubber shoe factory at Riga, the second largest in Russia.

=One of the popular features of the "Uncle Sam" knit boot—made by the United States Rubber Co.—is its stiffness. A limp boot is not much better than a stocking, and a boot that is simply knit and has nothing further done to it is very liable to be limp. The "Uncle Sam" knit boot gets its stiffness from the process patented by the United States Rubber Co., by which, after the stocking has been knit, long wool fiber is worked into the meshes. When the stocking is shrunk this fiber is held so tenaciously in the meshes that it can never work out, and not only makes the boot impervious to cold, but gives it a solidity and stiffness that it otherwise would not have.

=The Union Rubber and Supply Co., No. 363 Canal street, New York, have been in business since September 1, selling fire hose, mechanical rubber goods, and department supplies and making export trade a specialty. Mr. E. Howard Browne, the proprietor and manager, reports an encouraging condition of trade.

=The Empire Rubber Manufacturing Co. (Trenton, N. J.) have established an office in Richmond, Va., to facilitate the handling of a growing southern trade.

=The Byfield Rubber Co. (Bristol, R. I.) are reported to be running fifteen hours a day and to have orders in hand sufficient to keep them busy until March.

=The Mishawaka (Ind.) Rubber Worker's Union will hold a fair on November 8 to 11.

=A fire in the plant of The Rubber Paint Co., No. 36 Boston avenue, Chicago, on October 5, damaged the building to the extent of \$5000 and destroyed stock worth \$30,000. The company carry \$140,000 of insurance. They are incorporated, with \$100,000 capital, and the same stockholders own the Zeno Chewing Gum Co.

=Rubber factory superintendents are likely to find something of interest in a new pamphlet issued by the Joseph Dixon Crucible Co. (Jersey City, N. J.) in relation to the use of graphite for steam cylinders and valves.

=The Baltimore Rubber Co. have removed their wholesale business from No. 22 Hopkins street to a larger store, diagonally opposite, at Hopkins place and Lombard street. The first floor will be devoted to offices, and sales and sample rooms, and stocks of mechanical goods and druggists' sundries. The second floor will be devoted to boots and shoes, mackintoshes, and broken case goods, and the third floor to stored case goods. The company's retail department will be continued as before at No 12 North Charles street.

=The Belgian-Russian Electrical Co., which arranged lately for the electric lighting of St. Petersburg, have entered into negotiations with an English firm for the purpose of establishing a cable factory in Russia.

=The Pennsylvania Rubber Co. (Erie, Pa.), manufacturers of bicycle, carriage, and automobile tires, have opened a Chicago branch at No. 79 East Lake street, in charge of Robert M. Stuart. A branch also has been established at Buffalo, N. Y., at No. 200 Pearl street, in charge of E. B. Frazer.

=The Electric Hose Co. (Wilmington, Del.) are reported to have a steadily increasing business. They are about to make additions to their plant.

=Reports continue to come to hand regarding visits to the plant of the Saylor Rubber Co. (Franklin, Mass.), now closed, by parties interested in the practicability of converting it into a rubber shoe factory.

=Ambrose Waldron, foreman for many years of the cementing room of the National India Rubber Co. (Bristol, R. I.), died October 15.

=The John A. Roebling's Sons' Co. (Trenton, N. J.) are exhibiting at the National Export Exposition, at Philadelphia, a collection of samples of insulation work done in their new rubber plant. They are reported to be using 1000 pounds of rubber a day.

=The third meeting of the National Stamp Traders' Association, since its organization fourteen years ago, was held in Chicago last month, beginning October 10. It was attended by nearly a hundred delegates, representing the leading rubber stamp concerns in the United States and England.

=The Trenton Rubber Manufacturing Co. (Trenton, N. J.) are adding largely to their plant both in buildings and machinery. Of the former they are erecting one building of brick 100x70 feet, which will be used for a hose room. A second building also of brick 170x50, will be used for a mixing and calender room. The machinery will consist of the latest types of hose machines, mixers and calenders, the whole to be installed before the snow flies.

=Mr. George F. Hodgman, of the Hodgman Rubber Co. (New York), has just returned from a ten day trip among the company's large customers in the West.

=Mr. E. H. Garcin, general manager of the Trenton Rubber Manufacturing Co., is largely interested in the Arkansas Zinc Mining Co., which owns some 2000 acres of rich zinc lands in Arkansas.

=Since September 15 a slaughter sale of mackintoshes has been in progress in Sixth avenue, New York, and, more recently, also on lower Broadway. The concern conducting it is advertised as the Eastern Rubber Co., which, on account of having been "crushed by the syndicate," was forced into liquidation. An inquirer at one of the stores was told that the company's factory was located in Boston, and for further information he was referred to Mr. Brown, who was out at the time.

=A. Adamson (Akron, Ohio), who has supplied a large amount of factory equipment to rubber manufacturers recently, informs THE INDIA RUBBER WORLD that the capacity of his foundry and machine and pattern works is being doubled.

INDIVIDUAL MENTION.

=Mr. B. T. Morrison, general superintendent of the International Automobile and Vehicle Tire Co. (Boston), was married on October 16 to Miss Fanny E. Demmon, daughter of Mr. Daniel L. Demmon, one of the copper kings of the United States. Mr. Morrison and his bride went to Europe on their wedding tour.

=Miss Grace Towner, daughter of Mr. William Allen Towner, secretary and assistant treasurer of the Rubber Goods Manufacturing Co., was married on October 16 to Mr. John Lenard Merrill, Jr., of East Orange, N. J., in the Church of the Pilgrims, Brooklyn. Among the ushers was Mr. Ernest L. Baldwin, New York manager of the Empire Rubber Manufacturing Co.

=Mr. Edwin S. Kelly, general manager of the Consolidated Rubber Tire Co., sailed for Europe on October 18.

=Mr. William T. Baird, treasurer of the Mechanical Rubber Co. (New York), has just returned from New Brunswick, where he has been for his annual fall outing. This year, however, he had bad luck, and came home empty handed, the first time in years that he has missed getting at least one caribou.

REVIEW OF THE CRUDE RUBBER MARKET.

THE features of the crude rubber situation of special interest are the shortage in the output at Pará as compared with several recent crop years at this date and the activity of manufacturers. Both at Pará and in the chief consuming markets there has been a stiffening in prices in consequence of the situation being as above outlined. Arrivals of fresh cargoes of Pará sorts at New York have had but little effect upon the local markets, on account of the rubber having been largely sold ahead. It has been usual to expect a decline in crude rubber prices with the beginning of activity in the shipment of the new crop from Pará, but for the reasons above referred to no such decline appears probable in the near future.

From a Pará correspondent, October 4: "The situation in its general aspect has remained almost unchanged, and continues quite satisfactory. If the movement has been on a limited scale, it is due only to the want of supplies from the upriver districts. Entries have been smaller than anticipated, as is not unusual at this time of the year. The present scarcity, however, coupled with the existing demand, has been a factor in strengthening the position of rubber, while the retrograde movement of exchange, with enhanced currency prices, contribute to facilitate transactions."

The official returns of crude India-rubber and Gutta-percha into the United States for three years past have been as follows, in pounds:

	Imports.	Exports.	Net Imports.
January-August, 1897..	27,250,742		
January-August, 1898....	30,138,994	1,870,052	28,268,942
January-August, 1899....	36,832,718	1,969,359	34,863,359

During the six months ended June 30, 1899, the Mogyana railway brought down to Campinas, in the state of Sao Paulo, 223,742 pounds of mangabeira rubber, or 101,002 pounds more than during the same period in 1898.

A point of interest to most classes of rubber manufacturers is the continued high price of scrap rubber, which is quoted as high as 9 cents a pound for large lots, with a resulting high figure for reclaimed rubber.

The latest quotations in the New York market are:

PARÁ.		AFRICAN.	
Islands, fine, new....	97½ @ 98	Tongues.....	61 @ 62
Islands, fine, old.....	none here	Sierra Leone.....	52 @ 78
Upriver, fine, new....	104 @ 105	Benguella.	76 @ 77
Upriver, fine, old....	105 @ 106	Congo ball.....	62 @ 63
Islands, coarse, new....	62½ @ 63	Cameroon ball.....	62 @ 63
Islands, coarse, old....	none here	Flake and lumps.....	48 @ 52
Upriver, coarse, new....	81 @ 82	Accra flake.....	23 @ 24
Upriver, coarse, old....	83 @ 84	Accra buttons.....	67 @ 68
Caucho (Peruvian) sheet	63 @ 63½	Accra strips.....	70 @ 71
Caucho (Peruvian) strip	none imported now.	Lagos buttons.....	67 @ 68
Caucho (Peruvian) ball	76 @ 76½	Lagos strips.....	69 @ 70
CENTRALS.		Liberian flake....	@
Esmeralda, sausage....	72 @ 73	Madagascar, pinky....	84 @ 85
Guayaquil, strip.....	57 @ 62	Madagascar, black....	59 @ 60
Nicaragua, scrap....	71 @ 72	GUTTA-PERCHA.	
Mangabeira, sheet....	62 @ 63	Fine grade.....	1.50
EAST INDIAN.		Medium.....	1.30
Assam.....	79 @ 82	Hard white.....	1.00
Borneo.....	39 @ 54	Lower sorts.....	50
		Balata.....	

Late Pará cables quote:

	Per Kilo		Per Kilo.
Islands, fine.....	108500	Upriver, fine.....	128550
Islands, coarse.....	68000	Upriver, coarse.....	98350
Exchange 7½.			

NEW YORK PRICES FOR SEPTEMBER. (NEW RUBBER.)

	1899.	1898.	1897.
Upriver fine.....	1.01 @ 1.04½	96 @ 1.03	87 @ 88
Upriver coarse.....	77 @ 83	82 @ 87	59 @ 61
Islands fine.....	96 @ 99	93 @ 99	85 @ 86
Islands coarse.....	61 @ 63	63 @ 68	50 @ 51
Cametá coarse.....	62 @ 64	68 @ 74	55 @ 56½

STATISTICS OF PARA RUBBER (METRIC TONS).

	NEW YORK.				
	Fine and Medium.	Coarse.	Totals. 1899.	Totals. 1898.	Totals. 1897.
Stocks, August 31.....	212	101 =	313	88	216
Arrivals, September.....	417	235 =	652	407	975
Aggregating.....	629	336 =	965	495	1191
Deliveries, September.....	365	263 =	628	367	834
Stocks, September 30..	264	73 =	337	128	357

	PARÁ.			ENGLAND.		
	1899.	1898.	1897.	1899.	1898.	1897.
Stocks, August 31.....	695	350	340	670	480	630
Arrivals, September...	1350	1750	1660	385	725	330
Aggregating.....	2045	2100	2000	1055	1205	960
Deliveries, September....	1705	1665	1505	625	460	460
Stocks, Sept. 30...	340	435	495	430	745	500

	1899.	1898.	1897.
World's supply, Sept. 30 (excluding Caucho)...	1095	2227	2000
Pará receipts, July 1 to September 30.....	3645	4260	3770
Afloat from Pará to United States, Sept. 30....	263		
Afloat from Pará to Europe, September 30....	605	919	

IMPORTS FROM PARA AT NEW YORK.

[The figures denote weight in Pounds.]

September 25.—By the steamer <i>Maranhense</i> , from Manáos and Pará:					
IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
Reimers & Meyer.....	37,500	20,100	30,500	2,200 =	90,300
Albert T. Morse & Co. . .	33,500	10,000	55,400	10,200 =	109,100
New York Commercial Co..	47,500	11,100	21,300	9,000 =	88,800
Lawrence Johnson & Co..	33,900	5,500	6,600	..... =	46,000
Crude Rubber Co.....	13,600	5,700	10,600	1,000 =	30,900
Edmund Reeks & Co.....	10,700	1,400	2,400	..... =	14,500
George G. Cowl.....	7,900	700	1,200	..... =	9,800
Hagemeyer & Brunn.....	1,300	.....	1,300	..... =	2,600
Otto G. Mayer & Co.....	.....	.....	1,900	..... =	1,900
Total.....	185,900	54,500	131,200	14,300 =	385,900

October 5.—By the steamer <i>Hildebrand</i> , from Manáos and Pará:					
New York Commercial Co.	128,900	15,700	86,200	1,800 =	232,600
Albert T. Morse & Co....	50,400	7,300	46,400	700 =	104,800
Reimers & Meyer.....	42,800	6,800	26,900	1,500 =	78,000
George G. Cowl.....	30,000	4,600	9,500	..... =	44,100
Crude Rubber Co.....	17,800	3,200	20,500	..... =	40,900
Lawrence Johnson & Co..	23,900	2,300	6,300	..... =	32,500
Edmund Reeks & Co....	5,700	700	1,200	..... =	7,600
Otto G. Mayer & Co....	.....	.....	2,600	..... =	2,600
Total.....	298,900	40,600	212,400	4,000 =	555,900

October 16.—By the steamer <i>Dunstan</i> , from Pará:					
New York Commercial Co.	152,800	17,200	66,200	1,200 =	237,400
Albert T. Morse & Co....	42,600	3,300	72,800	..... =	118,700
Crude Rubber Co.....	76,400	12,900	20,300	..... =	109,600
Reimers & Meyer.....	27,500	11,400	57,600	10,600 =	107,100
Otto G. Mayer & Co....	55,000	7,200	18,400	..... =	80,600
Edmund Reeks & Co....	31,800	4,300	4,900	..... =	41,000
William Wright & Co....	.....	.....	23,700	..... =	23,700
Lawrence Johnson & Co..	12,000	2,200	3,200	..... =	17,400
George G. Cowl.....	.....	2,500	6,700	..... =	9,200
Hagemeyer & Brunn....	4,800	.....	2,000	..... =	6,800
Total.....	402,900	61,000	275,800	11,800 =	751,500

PARA RUBBER VIA EUROPE.

		FOUNDS.	
SEPT. 25.—By the <i>Etruria</i> =Liverpool:			
Reimers & Meyer (Fine and Medium)	24,200		
Reimers & Meyer (Coarse).....	7,000	31,200	
SEPT. 28.—By the <i>Teutonic</i> =Liverpool:			
A. T. Morse & Co. (Coarse).....	44,400		
Reimers & Meyer (Coarse).....	5,400	49,800	
OCT. 2.—By the <i>Campania</i> =Liverpool:			
Crude Rubber Co. (Fine).....	15,000		
George A. Alden & Co.—(Fine).....	4,500		
Reimers & Meyer (Coarse).....	7,000		
Otto G. Mayer & Co. (Coarse).....	22,000		
A. T. Morse & Co. (Coarse).....	15,000		
Reimers & Meyer (Cauchol).....	13,000	76,500	
OCT. 2.—By the <i>La Normandie</i> =Havre:			
Albert T. Morse & Co. (Coarse).....	45,000		
Reimers & Meyer (Cauchol).....	21,100		
Albert T. Morse & Co. (Cauchol).....	33,000	99,100	
OCT. 5.—By the <i>Servia</i> =Liverpool:			
William Wright & Co. (Coarse).....	4,700		
OCT. 6.—By the <i>Germanic</i> =Liverpool:			
George A. Alden & Co. (Fine and Medium).....	33,300		
Crude Rubber Co. (Fine and Medium).....	33,300		
Albert T. Morse Co. (Coarse).....	22,000	88,600	
OCT. 9.—By the <i>Umbria</i> =Liverpool:			
Reimers & Meyer (Coarse).....	44,500		
Reimers & Meyer (Fine and Medium).....	6,000		
George A. Alden & Co. (Coarse).....	6,800		
George A. Alden & Co. (Cauchol).....	1,800		
Crude Rubber Co. (Cauchol).....	1,500		
Crude Rubber Co. (Coarse).....	6,800	67,400	
OCT. 9.—By the <i>La Champagne</i> =Havre:			
George A. Alden & Co. (Coarse).....	5,500		
Crude Rubber Co. (Coarse).....	5,500		
Crude Rubber Co. (Fine and Medium).....	4,400		
George A. Alden & Co. (Fine and Medium).....	4,400	19,800	
OCT. 11.—By the <i>Georgic</i> =Liverpool:			
Reimers & Meyer (Cauchol).....	11,100		
OCT. 12.—By the <i>Albano</i> =Hamburg:			
Reimers & Meyer (Fine and Medium).....	17,100		
OCT. 19.—By the <i>Majestic</i> =Liverpool:			
A. T. Morse & Co. (Coarse).....	22,500		
William Wright & Co. (Coarse).....	7,500	30,000	

OTHER ARRIVALS AT NEW YORK.

CENTRALS.

		POUNDS.	
SEPT. 21.—By the <i>Patria</i> =Hamburg:			
Livesey & Co.	5,100		
SEPT. 22.—By the <i>Alliance</i> =Colon:			
Hirzel, Feltman & Co.	23,120		
G. Amsinck & Co.	16,493		
Isaac Brandon & Bros	10,875		
Czarnikow, McDougall & Co.	9,022		
Flint, Eddy & Co.	10,182		
A. Santos & Co.	5,580		
Roldan & Van Sichel	5,015		
Piza Nephews & Co.	2,565		
Dumarest & Co.	2,110		
J. Aparicio & Co.	2,110		
Lauman & Kemp.	2,263		
Moste Brothers	1,890		
A. P. Strout.	1,759		
Ellinger Bros.	1,885		
D. A. De Lima & Co.	1,365		
Kunhardt & Co.	880		
Eggers & Heinlein	815		
J. L. Mautner	800		
A. M. Capen Sons	375		
Lazard Freres	370		
Ascensio & Cassio	330		
E. Steiger & Co.	250		
H. Marquardt & Co.	250		
Mecke & Co	156		
Jimenez & Escobar	225		
R. G. Barthold.	114	100,800	
SEPT. 23.—By the <i>Niagara</i> =Mexico:			
L. N. Chem-dlin & Co.	4,000		
H. Marquardt & Co.	1,500		
H. W. Peabody & Co.	200	5,700	
SEPT. 25.—By the <i>Handel</i> =Bahia:			
New York Commercial Co.	1,900		
SEPT. 25.—By the <i>Etruria</i> =Liverpool:			
Reimers & Meyer	5,000		
George A. Alden Co.	6,100		
Crude Rubber Co.	6,100	17,200	
SEPT. 26.—By the <i>Excelsior</i> =New Orleans:			
Albert T. Morse & Co.	6,500		
SEPT. 25.—By the <i>Alta</i> =Greystown:			
A. P. Strout	9,000		
D. A. De Lima & Co.	4,500		
Kunhardt & Co.	4,000		

Munoz & Espriella	3,500		
Ellinger Brothers	1,000		
Andreas & Co.	800		
Roldan & Van Sichel	800		
Punderford & Co.	500		
Samper & Co.	500		
A. D. Straus & Co.	300		
G. Amsinck & Co.	300		
H. W. Peabody & Co.	300		
Lazard Freres	100	27,700	
SEPT. 27.—By the <i>Grenada</i> =Trinidad:			
Punderford & Co.	500		
Kunhardt & Co.	300		
Jose Agostini	200		
Mecke & Co.	200	1,200	
SEPT. 27.—By the <i>Advance</i> =Colon:			
Hirzel, Feltman & Co.	8,000		
G. Amsinck & Co.	6,592		
Czarnikow, McDougall & Co.	4,817		
Roldan & Van Sichel	2,832		
Crude Rubber Co.	2,796		
M. Valverde & Co.	2,483		
Flint, Eddy & Co.	2,105		
Eggers & Heinlein	1,264		
Isaac Brandon & Bros.	124	31,023	
SEPT. 28.—By the <i>Algiers</i> =New Orleans:			
A. T. Morse & Co.	1,100		
SEPT. 28.—By the <i>Teutonic</i> =Liverpool:			
George A. Alden & Co.	3,000		
Crude Rubber Co.	3,000	6,000	
OCT. 2.—By the <i>Graf Waldersee</i> =Hamburg:			
George A. Alden & Co.	4,700		
OCT. 2.—By the <i>Caracas</i> =Curacao:			
Suzarte & Whitney	1,700		
Jimenez & Escobar	200	1,900	
OCT. 3.—By the <i>El Monte</i> =New Orleans:			
Albert T. Morse & Co.	1,100		
M. Larberry	700	1,800	
OCT. 3.—By the <i>Adirondack</i> =Cartagena:			
D. A. De Lima & Co.	2,000		
Samper & Co.	1,000		
Guterman, Rosenfeld & Co.	900		
Kunhardt & Co.	700		
F. Halberstedt & Co.	300	4,900	
OCT. 4.—By the <i>Wordsworth</i> =Pernambuco:			
A. D. Hatch & Co.	3,500		
L. Johnson & Co.	1,500	5,000	
OCT. 4.—By the <i>Financ</i> =Colon:			
Isaac Brandon & Bros.	6,257		
A. P. Strout	3,071		
D. A. De Lima & Co.	2,300		
W. Loalza & Co.	1,371		
H. W. Peabody & Co.	1,150		
G. Amsinck & Co.	1,167		
Flint, Eddy & Co.	620		
H. Marquardt & Co.	692		
Lazard Freres	372	16,900	
OCT. 5.—By the <i>Servia</i> =Liverpool:			
Reimers & Meyer	5,800		
OCT. 7.—By the <i>St. Louis</i> =Southampton:			
Reimers & Meyer	3,400		
OCT. 6.—By the <i>Pennsylvania</i> =Hamburg:			
Reimers & Meyer	22,000		
Livesey & Co.	2,200	24,200	
OCT. 9.—By the <i>Segurana</i> =Mexico:			
E. Steiger & Co.	5,500		
P. Harmony Nephews & Co.	1,000		
H. Marquardt & Co.	1,000		
Graham, Hinckley & Co.	300		
H. W. Peabody & Co.	200	8,800	
OCT. 9.—By the <i>Alene</i> =Greystown:			
A. P. Strout	3,000		
Andreas & Co.	2,500		
Lauman & Kemp	2,500		
G. Amsinck & Co.	1,000		
Kunhardt & Co.	1,000		
Punderford & Co.	800		
Lawrence Johnson & Co.	600		
W. H. Crossman & Bros.	300		
Cardenas & Co.	300		
Munoz & Espriella	200	12,200	
OCT. 14.—By the <i>Buffon</i> =Pernambuco:			
Lawrence Johnson & Co.	8,500		
OCT. 11.—By the <i>Hudson</i> =New Orleans:			
A. T. Morse & Co.	6,500		
A. N. Rotholz & Co.	1,000		
W. Loalza & Co.	1,500		
T. N. Morgan	1,000	10,000	
OCT. 12.—By the <i>Athos</i> =Colon:			
Hirzel, Feltman & Co.	26,045		
Czarnikow, McDougall & Co.	11,641		
G. Amsinck & Co.	11,804		
A. Santos & Co.	5,040		
Lauman & Kemp	4,457		
Roldan & Van Sichel	4,250		

Dumarest & Co.	2,760		
W. E. Grace & Co.	1,511		
Samper & Co.	1,022		
J. Aparicio & Co.	1,568		
D. A. De Lima & Co.	1,003		
J. Brandon & Bros.	465		
W. Loalza & Co.	206		
F. Niets & Co.	128	71,900	
OCT. 12.—By the <i>Carib</i> =Truxillo:			
Eggers & Heinlein	4,000		
Jose Agostini	4,500		
H. W. Peabody & Co.	1,000		
A. S. Lascelles & Co.	500	10,000	
OCT. 13.—By the <i>Yucatan</i> =Mexico:			
E. Steiger & Co.	6,600		
H. W. Peabody & Co.	5,000		
J. W. Wilson & Co.	500	11,500	
OCT. 14.—By the <i>Excelsior</i> =New Orleans:			
Albert T. Morse & Co.	2,000		
Eggers & Heinlein	1,000	3,000	
OCT. 14.—By the <i>Palatia</i> =Hamburg:			
J. H. Rossbach & Bros.	20,000		
Livesey & Co.	9,100	29,100	
OCT. 17.—By the <i>Louisiana</i> =New Orleans:			
Albert T. Morse & Co.	2,000		
OCT. 18.—By the <i>El Monte</i> =New Orleans:			
Eggers & Heinlein	3,000		
OCT. 18.—By the <i>Alleghany</i> =Cartagena:			
Samper & Co.	12,000		
D. A. De Lima & Co.	11,500		
G. Amsinck & Co.	6,000		
Kunhardt & Co.	6,000		
H. W. Peabody & Co.	3,000		
For Antwerp	3,500		
Guterman, Rosenfeld & Co.	900		
Ellinger Brothers	600		
J. A. Pauli & Co.	500		
Punderford & Co.	500	44,500	
OCT. 18.—By the <i>Alliance</i> =Colon:			
G. Amsinck & Co.	9,024		
Ellinger Brothers	6,905		
Flint, Eddy & Co.	3,387		
Isaac Brandon & Bros.	2,986		
Kunhardt & Co.	1,558		
A. P. Strout	1,404		
Lauman & Kemp	513		
J. Aparicio & Co.	427		
W. H. Crossman & Bros.	333		
Jimenez & Escobar	260		
Lazard Freres	213	27,200	
OCT. 20.—By the <i>Seneca</i> =Mexico:			
H. Marquardt & Co.	7,000		
E. Steiger & Co.	700		
F. Probst & Co.	500		
F. Probst & Co.	300	8,500	

AFRICANS.

			FOUNDS.
SEPT. 21.—By the <i>Patricia</i> =Hamburg:			
Livesey & Co.	12,500		
Reimers & Meyer.	12,400		
A. T. Morse & Co	13,000	37,900	
SEPT. 23.—By the <i>Cufic</i> =Liverpool:			
Geo. A. Alden & Co.			7,000
SEPT. 25.—By the <i>Etruria</i> =Liverpool:			
Reimers & Meyer	23,800		
George A. Alden & Co.	22,300		
Crude Rubber Co.	22,300		
Otto G. Mayer & Co	6,500		
Livesey & Co	4,700	79,600	
SEPT. 25.—By the <i>Rotterdam</i> =Rotterdam:			
Otto G. Mayer & Co			8,500
SEPT. 25.—By the <i>Phanicia</i> =Hamburg:			
Reimers & Meyer.			21,300
SEPT. 26.—By the <i>Friesland</i> =Antwerp:			
Reimers & Meyer	11,200		
George A. Alden & Co.	12,300	23,500	
SEPT. 28.—By the <i>Teutonic</i> =Liverpool:			
George A. Alden & Co	22,400		
Crude Rubber Co.	22,000		
Livesey & Co.	13,600	58,000	
OCT. 2.—By the <i>Campania</i> =Liverpool:			
Reimers & Meyer.	26,800		
Otto G. Mayer & Co	5,000		
Livesey & Co.	15,300	47,100	
OCT. 2.—By the <i>Graf Waldersee</i> =Hamburg:			
Reimers & Meyer.			22,500
OCT. 2.—By the <i>Meosba</i> =London:			
George A. Alden & Co.	6,000		
Crude Rubber Co.	6,000	12,000	
OCT. 5.—By the <i>Servia</i> =Liverpool:			
Livesey & Co			13,700
OCT. 7.—By the <i>St. Louis</i> =Southampton:			
Reimers & Meyer			5,500

OCT. 6.—By the <i>Germania</i> =Liverpool:	
George A. Alden & Co.	5,000
Crude Rubber Co.	6,900
A. T. Morse & Co.	22,500
Otto G. Mayer & Co.	8,700
Livesey & Co.	5,400
	44,600
OCT. 6.—By the <i>Pennsylvania</i> =Hamburg:	
Reimers & Meyer	11,600
George A. Alden & Co.	15,000
	26,600
OCT. 9.—By the <i>Umbria</i> =Liverpool:	
A. T. Morse & Co.	23,900
George A. Alden & Co.	18,700
Crude Rubber Co.	18,900
Reimers & Meyer	8,000
	68,400
OCT. 9.—By the <i>Manitou</i> =London:	
George A. Alden & Co.	5,300
Crude Rubber Co.	5,100
	10,300
OCT. 11.—By the <i>Georgia</i> =Liverpool:	
Otto G. Mayer & Co.	2,200
OCT. 10.—By the <i>Westernland</i> =Antwerp:	
Reimers & Meyer	58,100
George A. Alden & Co.	30,700
Crude Rubber Co.	29,000
	118,400
OCT. 11.—By the <i>Oceanic</i> =Liverpool:	
George A. Alden & Co.	19,200
Crude Rubber Co.	18,800
Otto G. Mayer & Co.	34,800
Reimers & Meyer	51,000
Livesey & Co.	11,500
	137,300
OCT. 12.—By the <i>St. Andrew</i> =Antwerp:	
Albert T. Morse & Co.	21,000
OCT. 12.—By the <i>Albano</i> =Hamburg:	
Reimers & Meyer	11,800
OCT. 14.—By the <i>Lucania</i> =Liverpool:	
George A. Alden & Co.	58,600
Crude Rubber Co.	52,100
Reimers & Meyer	36,200
Livesey & Co.	18,500
	165,400
OCT. 16.—By the <i>Cymric</i> =Liverpool:	
George A. Alden & Co.	22,000
Crude Rubber Co.	22,000
Reimers & Meyer	23,000
	69,000
OCT. 16.—By the <i>Menominee</i> =London:	
George A. Alden & Co.	3,100
Crude Rubber Co.	3,100
	6,200
OCT. 16.—By the <i>Bulgaria</i> =Hamburg:	
Reimers & Meyer	11,600
OCT. 17.—By the <i>Kensington</i> =Antwerp:	
Reimers & Meyer	55,000
OCT. 19.—By the <i>Majestic</i> =Liverpool:	
George A. Alden & Co.	52,500
Crude Rubber Co.	54,000
Otto G. Mayer & Co.	11,500
William Wright & Co.	8,000
	126,000

OCT. 20.—By the <i>Pretoria</i> =Hamburg:	
Reimers & Meyer	45,000
Livesey & Co.	15,000
	60,000
EAST INDIAN.	
SEPT. 22.—By the <i>Yangtze</i> =Singapore:	
Reimers & Meyer	7,000
J. W. Greene & Co.	13,400
	20,400
SEPT. 22.—By the <i>Inchmona</i> =Calcutta:	
George A. Alden & Co.	4,800
SEPT. 25.—By the <i>Indrapura</i> =Singapore:	
Reimers & Meyer	10,600
SEPT. 25.—By the <i>Marquette</i> =London:	
Reimers & Meyer	26,200
SEPT. 25.—By the <i>Pondo</i> =Calcutta:	
Reimers & Meyer	2,700
George A. Alden & Co.	1,700
	4,400
OCT. 9.—By the <i>Manitou</i> =London:	
Otto G. Mayer & Co.	1,300
OCT. 9.—By the <i>Mashona</i> =Calcutta:	
George A. Alden & Co.	1,100
SEPT. 22.—By the <i>Yangtze</i> =Singapore:	
Reimers & Meyer (Pontianak)	211,000
J. W. Greene & Co. (Pontianak)	134,000
	345,000
SEPT. 25.—By the <i>Indrapura</i> =Singapore:	
Reimers & Meyer (Pontianak)	274,000
George A. Alden & Co. (Pontianak)	66,000
	340,000

GUTTA-PERCHA AND BALATA.

SEPT. 25.—By the <i>Indrapura</i> =Singapore:	
R. Soltau & Co.	11,000
SEPT. 25.—By the <i>Phanicia</i> =Hamburg:	
R. Soltau & Co.	13,000
OCT. 2.—By the <i>Mezaba</i> =London:	
Lamb Manufacturing Co.	3,500
OCT. 6.—By the <i>Pennsylvania</i> =Hamburg:	
R. Soltau & Co.	6,500
OCT. 9.—By the <i>Manitou</i> =London:	
Lamb Manufacturing Co.	3,500
OCT. 14.—By the <i>Palatia</i> =Hamburg:	
R. Soltau & Co.	4,000

BALATA.

SEPT. 27.—By the <i>Grenada</i> =Trinidad:	
Flint, Eddy & Co.	1,000
OCT. 9.—By the <i>Irareddy</i> =Trinidad:	
Thebaud Brothers	3,000

CUSTOM HOUSE FIGURES.

PORT OF NEW YORK—SEPTEMBER.

Imports:	POUNDS.	VALUE.
India-rubber	3,346,843	\$1,871,823
Gutta jelatong (Pontianak)	1,822,477	61,099
Total	5,169,320	\$1,922,922
Exports:		
India-rubber	19,561	\$ 8,053
Reclaimed rubber	112,329	15,153

BOSTON ARRIVALS.

	POUNDS.	VALUE.
SEPT. 5.—By the <i>Michigan</i> =Liverpool:		
Livesey & Co.—Africans	2,488	
SEPT. 8.—By the <i>Arcadia</i> =Hamburg:		
George A. Alden & Co.—East Indian	14,608	
SEPT. 14.—By the <i>Cambrion</i> =London:		
Reimers & Meyer.—East Indian	10,825	
SEPT. 19.—By the <i>Sagamore</i> =Liverpool:		
Reimers & Meyer—Africans	13,109	
Livesey & Co.—Africans	1,271	
SEPT. 20.—By the <i>Columbian</i> =London:		
George A. Alden & Co.—East Indian	51,156	
Crude Rubber Co.—East Indian	42,659	
SEPT. 25.—By the <i>Cephalonia</i> =Liverpool:		
Reimers & Meyer.—Fine Pará	26,503	
SEPT. 25.—By the <i>H. F. Dimock</i> =New York:		
Reimers & Meyer.—Africans	4,498	
[From the <i>Noordland</i> , Antwerp, arrived New York September 30.]		
SEPT. 26.—By the <i>Storm King</i> =Antwerp:		
George A. Alden & Co.—Africans	2,926	
Crude Rubber Co.—Africans	2,920	
POUNDS. VALUE.		
Total for September	172,963	\$109,975
Total for August	249,141	162,947
Total for July	142,954	89,636
Total for June	47,404	25,231
Total for May	71,493	47,317
Total for April	204,780	119,616
Total for March	89,170	51,945
Total for February	317,936	197,523
Total for January	247,345	147,488

GUTTA-PERCHA.

SEPT. 28.—By the <i>Storm King</i> =Antwerp:	
George A. Alden & Co.	642

NEW ORLEANS.

SEPTEMBER.

	POUNDS.	VALUE.
From Honduras	2,769	\$ 1,628
From Nicaragua	14,289	10,316
Total	17,058	\$12,922

SEPTEMBER EXPORTS OF INDIA-RUBBER FROM PARA (KILOGRAMS.)

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL.
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Adelbert H. Alden	130,730	28,220	84,240	3,520	246,710	41,650	6,120	18,260	—	66,030	312,740
Pusinelli, Prusse & Co.	55,420	30,770	50,560	1,880	138,630	105,910	13,430	21,540	1,500	142,380	281,010
Frank da Costa & Co.	51,726	9,152	87,520	1,360	149,758	77,704	6,668	14,504	920	95,796	249,554
The Sears Pará Rubber Co.	35,340	14,110	23,760	480	73,690	—	—	—	—	—	73,690
Rudolf Zietz	1,760	320	4,904	—	6,984	24,147	5,491	4,567	—	34,205	41,189
R. Suarez & Co.	—	—	—	—	—	22,004	6,732	4,988	—	33,724	33,724
H. A. Astlett	15,810	2,040	4,160	—	22,010	—	—	—	—	—	22,010
Denis Cronan & Co.	—	—	6,400	—	6,400	—	—	—	—	—	6,400
Pires, Teixeira & Co.	637	—	636	—	1,273	—	—	—	—	—	1,273
Sundry small shippers	14,280	2,210	7,405	—	23,895	16,312	1,496	427	—	18,235	42,130
Direct from Manáos	50,320	7,480	8,630	5,878	72,308	147,889	32,387	37,216	8,408	225,894	298,202
Total	356,023	94,302	278,215	13,118	741,658	435,616	72,318	101,502	10,828	620,264	1,361,922

MONTHS.	United States.	England.	Continent.	Total.	MONTHS.	From Iquitos.	From Manáos.	From Pará.	Total.
January-June	8,085,867	4,948,253	1,459,474	14,493,594	January-June	455,673	4,595,843	9,442,078	14,493,594
July	348,184	588,110	183,917	1,120,220	July	107,079	186,621	826,520	1,120,220
August	520,975	534,666	127,038	1,182,679	August	—	198,271	984,408	1,182,679
September	741,658	555,697	64,567	1,361,922	September	—	298,202	1,063,720	1,361,922
Total for 1899	9,696,684	6,626,735	1,834,996	18,158,415	Total for 1899	662,752	5,278,937	12,316,726	18,158,415

1899.

S.

R.

VALUR.

871,823

51,090

922,922

\$ 8,053

15,153

OUNDS.

2,488

14,008

10,825

13,109

1,271

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York

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VALUR.

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642

VALUR.

1,626

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AL.

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